DOCKETED

Docket Number:	07-AFC-06C
Project Title:	Carlsbad Energy Center - Compliance
TN #:	203981
Document Title:	Carlsbad Energy Center Project Amendment FSA Supplement and CEC Staff Rebuttal Testimony
Description:	Supplement and Rebuttal
Filer:	Alexis Surita
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	3/27/2015 2:17:00 PM
Docketed Date:	3/27/2015

ENERGY COMMISSION STAFF'S SUPPLEMENT TO THE FINAL STAFF ASSESSMENT AND REBUTTAL TESTIMONY

This filing will serve two primary purposes; first it will supplement the February 17, 2015 Final Staff Assessment (FSA) in the **Air Quality** technical section. Because the Final Determination of Compliance (FDOC) from San Diego Air Pollution Control District was not filed prior to the FSA, that particular section of the FSA was published on February 17, 2015 without certain data points and conditions of certification required for completeness. With the March 19, 2015 publication of the FDOC, staff has now been able to complete its testimony. This filing also serves as staff's rebuttal testimony. Staff has filed its direct testimony in the form of the FSA, and also identified its witnesses for Evidentiary Hearings it its Prehearing Conference Statement filed on March 12, 2015. For ease of reference, analysis and/or rebuttal testimony for the following technical areas can be found on the following pages within this filing:

- AIR QUALITY (supplemental analysis, pp. 2-6; Conclusions, pg. 6; AQ Appendix AQ-1, pg. 9; Rebuttal Testimony, pp. 10-13)
- ALTERNATIVES (Rebuttal Testimony, pp. 14-15)
- NOISE & VIBRATION (Rebuttal Testimony, pp. 15-17)
- SOIL & WATER (Rebuttal Testimony, pp. 17-18)
- TRAFFIC & TRANSPORTATION (Rebuttal Testimony, pp. 18-19)
- VISUAL RESOURCES (Rebuttal Testimony, pp. 19-22)
- WASTE MANAGEMENT (Rebuttal Testimony, pp. 22-23)
- WORKER SAFETY/ FIRE PROTECTION (Rebuttal Testimony, pg. 23).

An appendix (Appendix A, attached) containing all of the proposed conditions of certification has also been included in this filing. The proposed conditions of certification in the Appendix A are formatted to include:

- Approved conditions of certification from the licensed CECP related to construction and demolition and any modifications;
- Additions or deletions required for the amended CECP, with edits that were included in the February 17, 2015 Final Staff Assessment (FSA) indicated with deleted text in ~~strikethrough~~, and new text in **bold and underlined**; and
- Edits made *after* publication of the FSA and addressed in this supplement that are indicated with deleted text in ~~double strikethrough,~~ and new text in **bold and double underlined**.

SUPPLEMENT TO THE FINAL STAFF ASSESSMENT

AIR QUALITY

Testimony of William Walters, P.E.

INTRODUCTION

This supplement provides an update to the FSA's Air Quality Section necessary to integrate changes between the San Diego Air Pollution Control District's (District) Final Determination of Compliance (FDOC), published on March 19, 2015 and the Preliminary DOC, published on December 12, 2014. The major change in the FDOC was the revision in the Encina Power Station (EPS) baseline period used for the amended Carlsbad Energy Center Project's (amended CECP) emissions increase determination. This revision resulted in NOx emissions exceeding New Source Review (NSR) permitting threshold for requiring offsets and Lowest Achievable Emissions Rate (LAER) requirements. Other changes included major changes in approximately half a dozen District conditions of certification including the addition of four conditions, a major change to one staff condition of certification, and over two dozen minor changes in the District conditions of certification[1]. This supplement provides documentation and explanation of these FDOC and FDOC related revisions.

SUMMARY OF CONCLUSIONS

Staff's overall conclusion has not changed. With the adoption of the attached revised conditions of certification, the proposed amended Carlsbad Energy Center Project (amended CECP) would conform with applicable federal, State, and San Diego Air Pollution Control District (District) air quality laws, ordinances, regulations, and standards, and the proposed amended Carlsbad Energy Center Project would not result in significant air quality related impacts.

PROPOSED MODIFIED PROJECT

The changes in the FDOC did not require any revisions to the proposed amended CECP power plant design. However, to address project owner concerns, the District's FDOC does include allowing an additional 350 gas turbine starts during initial commissioning.

LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

The LORS have not changed since the FSA was published. Please see later descriptions of the changes in the interpretation of the LORS requirements.

[1] This does not include the renumbering of conditions that affected almost all of the District Conditions of Certification.

SETTING

The environmental setting has not changed since the FSA.

PROJECT DESCRIPTION AND EMISSIONS

The project description has not changed since the FSA was published. However, some of the emissions assumptions, including the Encina Power Station (EPS) baseline emissions used in the NSR permitting, have changed. Those specific changes, and only those changes, are described below:

An increase in the allowed annual CO emissions has been approved in the FDOC to account for elevated CO emissions during commissioning. This annual emissions limit increase, only allowed during the commissioning period, is 24.27 tons. Short-term CO emissions limits are unaffected, so this change would not increase the 1-hour and 8-hour NAAQS and CAAQS CO ambient concentration impacts determined for the project and described in the FSA.

The other emissions change contained in the FDOC is the EPS baseline and resulting amended CECP emissions increase determination. To address comments received on the PDOC, the representativeness of the EPS baseline period was investigated thoroughly by the District and included information gathered from the Energy Commission and the California Independent System Operator (CAISO). The District determined that a specific representative two-year period within the 5-year baseline period prior to the permit application receipt (2009 to 2013) could not be established, so per District rules, the 5-year period average was determined to be appropriate for permitting. This revision affects the information presented in FSA Air Quality Table 21. That section of the FSA, p. 4.1-32, is revised below. Changes to the conditions of certification are shown in double underline and double strikethrough.

Air Quality Table 21 summarizes the revised estimate for the maximum annual emissions for the amended CECP, the existing EPS annual emissions baseline as determined by the District through a review of recent emissions data (years 2009 to 2013), and the expected maximum annual incremental project emission increase or decrease from the EPS baseline.

Revised Air Quality Table 21
Amended CECP Incremental Annual Emissions

Emission Source	Pollutant (tons/year)				
	NOx	CO[b]	VOC	SOx	PM[c]
Amended CECP Expected Maximum Annual	84.18[a]	77.83	24.06	5.59	28.35
Encina Power Station (EPS) Emissions Baseline[d]	44.23	140.46	22.87	2.98	31.65
Amended CECP Net Emissions Change	39.95	-62.63	1.19	2.61	-3.30
Licensed CECP Net Emissions Change	39.9	-51.51	4.8	-0.6	7.5

Sources: (SDAPCD 2015, CEC 2012)
Notes:
[a] The project owner has taken a reduced facility-wide NOx emission limit, a very small reduction of less than 0.9 tons/year, to ensure that emissions were limited below District PSD permitting thresholds.

[b] This represents normal operating years. For the initial commissioning year the annual CO emissions would be permitted to 102.1 tons, which for that one year of initial commissioning would result in an emission decrease of 38.36 tons.
[c] PM=PM10=PM2.5
[d] This baseline represents the average annual values determined by SDAPCD using their approved 2009 through 2013 annual emissions estimates for the EPS.

ASSESSMENT OF IMPACTS AND DISCUSSION OF MITIGATION

The bulk of the impact assessment was not affected by the FDOC revisions. The specific changes to the impact assessment relate to the new District requirement for NOx offsets and the associated revisions to staff's CEQA offset determination. This change to the project's mitigation requirements also affects both District and staff conditions of certification that are presented in revisions to FSA Section 7's Air Quality conditions that are included in this supplement. The revisions to the PSA's impact analysis are discussed below.

EMISSION OFFSETS

District Rules 20.1 and 20.3 require NOx and VOC offsets for a major modification to an existing major stationary source (in this case, EPS) defined as an emission increase of 25 tons per year or more for NOx or VOC emissions. The existing EPS is considered an existing major stationary source and the revised net emissions increase from the amended CECP would exceed the threshold for NOX emissions, but not for VOC emissions. Therefore, the District only requires NOx emissions offsets. District rules require a 1.2:1 offset ratio. In addition, the District allows interpollutant offsetting using VOC reductions to offset for NOx increases at an offset ratio of 2:1.

The project owner has proposed to offset NOx emissions through NOx and VOC emission reduction credits, using the interpollutant ratio of 2:1 for VOC ERCs for NOx emissions and the District's Federal Offset Requirement ratio of 1.2 to 1 for both interpollutant traded VOC offsets and NOx offsets. The petitioner has proposed three offset certificates that total, after application of the interpollutant offset ratio, 50.15 tons of NOx equivalent reduction credits per year.

Air Quality Supplement Table 1
NOx Offsets Available for Amended CECP

Pollutant	Location	Credit Number	ERC Amount (tons/year)	NOx equivalent Amount (tons/year)
NOx	Naval Air Station – North Island	978938-05	35.3	35.3
NOx	3200 Harbor Drive, San Diego	981518-01	2.3	2.3
VOC	2145 East Belt Drive, San Diego	983809-02	25.1	12.55
			Total ERC	50.15
			Total Required (at 1.2:1 ratio)	47.94
			Total Surplus	1.72

Source: FDOC (SDAPCD 2015)

Air Quality Supplement Table 1 shows that the total amount of NOx equivalent ERCs available (50.15 tons per year) exceeds the District's offset requirements based on the revised potential to emit NOx emission increase of 39.95 tons per year. This offset proposal also meets staff's recommended minimum offset ratio of 1:1 for the emissions increases of ozone precursors (NOx and VOCs). As shown in **Revised Air Quality Table 21**, NOx and VOC emissions have a total proposed emission increase of 41.14 tons per year (39.95 + 1.19 = 41.14). For purposes of CEQA, the Energy Commission requires emissions to be offset on at least a 1.0 to 1.0 offset ratio basis. The total amount of NOx equivalent ERCs required by the District, 47.94 tons/year, as shown in refore the identified available offsets of 50.15 tons per year for NOx and VOCs in Air Quality Supplement Table 1 exceeds the staff recommended 1.0 to 1.0 CEQA mitigation for ozone precursors.

Staff Proposed Mitigation

Revised Air Quality Table 21 shows a proposed increase of 2.98 tons per year for SOX. The project's proposed increase in SOx is offset by the decrease in PM10/PM2.5 emissions. The FDOC's air quality impact analysis concluded there would be no exceedance of the AAQS due to secondary PM2.5 formation. Therefore staff does not believe that this proposed increase of 2.61 tons per year of SOx requires additional mitigation.

The District is now requiring ozone precursor mitigation that is sufficient to meet staff's CEQA mitigation recommendations. Therefore staff is proposing to delete its ozone precursor offset requirement provided in Condition of Certification **AQ-SC10**. Staff is proposing no other significant changes to the staff conditions of certification presented in the FSA.

COMPLIANCE WITH LORS

The San Diego Air Pollution Control District issued a Final Determination of Compliance for the amended CECP on March 19, 2015. The District considered comments received from responsible agencies and the public prior to publication of the FDOC. The substantive changes to the District's PDOC findings presented in the FDOC are provided below:

Regulation II – Permits

Rule 20.1 and 20.3 – New Source Review

The District considered the comments received related to NSR and PSD permitting and that review resulting in substantial review of the amended CECP BACT requirements and the appropriate EPS emissions baseline period. The District's review and findings are discussed below.

Rule 20.3(d)(1) – Best Available Control Technology/Lowest Achievable Emission Rate

The District evaluated comments on adequacy of the CO and VOC BACT/LAER levels. The District noted that BACT/LAER is not actually required for the CO emissions from this project.

For VOC, the District conducted a thorough review of available data for simple-cycle power plants, particularly simple-cycle power plants including those using GE LMS100 gas turbines that are proposed for the amended CECP. The District requested source test data available through the Energy Commission, and staff collected all available relevant data and provided that data to the District. The District concluded that requiring an oxidation catalyst with a 2.0 ppm concentration limit (1-hour clock averaging) meets BACT and a lower limit, specifically a 1.0 ppm concentration limit, was not demonstrated for GE LMS100 gas turbines. Furthermore, requiring an emissions concentration that low would likely not be complied with on a consistent basis.

Staff agrees with both of these BACT/LAER findings.

Rule 20.3(d)(5) – Emission Offsets

This portion of the rule requires that emissions of any federal nonattainment criteria pollutant or its precursors that exceed major source thresholds be offset with actual emission reductions. The District is a federal nonattainment area only for ozone. Therefore, this rule requires offsets only for NOx and VOC emissions, as ozone precursors, if the amended project's net emissions increase more than 25 tons per year for either of these two pollutants. The amended CECP-permitted emission increase of NOx, after re-evaluation of the appropriate EPS baseline emissions period, exceeds 25 tons per year and will be required to be offset as specified in District Condition of Certification **AQ-4**.

Rule 20.3(e)(1) – Compliance Certification

The project is subject to LAER and therefore a compliance certification is required. The FDOC notes that the project owner provided the District a compliance certification as required by this rule and their compliance certification indicates compliance at all applicable major sources.

CONCLUSIONS

Based on the revised FDOC, a few of Staff's FSA conclusions have changed, and those revised conclusions are as follows:

- The amended project would comply with applicable District Rules and Regulations, including New Source Review Best Available Control Technology (BACT), Lowest Achievable Emission Rate (LAER), and offset requirements, and staff recommends the inclusion of the Districts DOC conditions as Conditions of Certification **AQ-1** through **AQ-120**.
- The amended project's construction and demolition activities requested under the PTR and PTA, if unmitigated, would likely contribute to significant adverse PM10 and ozone impacts. Therefore, staff recommends **AQ-SC1** to **AQ-SC5, AQ-SC11** and **AQ-SC12** to mitigate these potential impacts.
- Condition of Certification **AQ-SC10** is no longer needed and can be deleted.
- With the conditions of certification recommended by staff, including all requirements in the air district's DOC including the District's NOx offsets required in **AQ-4**, the project will comply with all applicable LORS.

REFERENCES

CEC 2012– California Energy Commission. Carlsbad Energy Project, Commission Decision, CEC-800-2011-004-CMF. June 2012.

SDAPCD 2015 – San Diego Air Pollution Control District (TN203924). Final Determination of Compliance – Carlsbad Energy Center. Submitted March 19, 2015.

ACRONYMS

AAQS	Ambient Air Quality Standard
APCD	Air Pollution Control District (SDAPCD)
AQCMM	Air Quality Construction/Demolition Mitigation Manager
AQCMP	Air Quality Construction/Demolition Mitigation Plan
ARB	California Air Resources Board
AST	Aboveground Storage Tank
ATCM	Airborne Toxic Control Measure
BACT	Best Available Control Technology
bhp	brake horsepower
Btu	British thermal unit
CAAQS	California Ambient Air Quality Standard
CAISO	California Independent System Operator
CCR	California Code of Regulations
CEC	California Energy Commission (or Energy Commission)
CECP	Carlsbad Energy Center Project
CEQA	California Environmental Quality Act
CEM	Continuous Emission Monitor
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2	Carbon Dioxide
CTG	Combustion Turbine Generator
CPM	(Energy Commission) Compliance Project Manager
CPUC	California Public Utilities Commission
DAHS	Data Acquisition and Handling System
DPM	Diesel Particulate Matter
dscf	dry standard cubic foot
dscm	dry standard cubic meter
EIR	Environmental Impact Report
EPA	Environmental Protection Agency (same as U.S. EPA)
EPS	Encina Power Station
ERC	Emission Reduction Credit
DOC	Final Determination Of Compliance
FSA	Final Staff Assessment
GHG	Greenhouse Gas
gpm	Gallons per minute
gr	Grains (1 gr $\cong$ 0.0648 grams, 7000 gr = 1 pound)
HAP	Hazardous Air Pollutant
hp	horsepower
H_2S	Hydrogen Sulfide
LAER	Lowest Achievable Emission Rate
lbs	pounds

LDAR	Leak Detection and Repair
LORS	Laws, ordinances, regulations and standards
MCR	Monthly Compliance Report
mg/m^3	milligrams per cubic meter
MMBtu	Million British thermal units
MW	Megawatts (1,000,000 Watts)
NAAQS	National Ambient Air Quality Standard
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_3	Nitrates
NOx	Oxides of Nitrogen *or* Nitrogen Oxides
NSR	New Source Review
O_2	Oxygen
O_3	Ozone
OLM	Ozone Limiting Method
PDOC	Preliminary Determination Of Compliance
PM	Particulate matter
PM10	Particulate matter less than 10 microns in diameter
PM2.5	Particulate matter less than 2.5 microns in diameter
ppm	Parts per million
ppmv	Parts per million by volume
ppmvd	Parts per million by volume, dry
PSA	Preliminary Staff Assessment
PSD	Prevention of Significant Deterioration
PTA	Petition to Amend
PTO	Permit to Operate
PTR	Petition to Remove
RATA	Relative Accuracy Test Audit
scf	Standard cubic feet
SCR	Selective Catalytic Reduction
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SO_3	Sulfate
SOx	Oxides of sulfur
SWPPP	Storm Water Pollution Prevention Plan
T-BACT	Best Available Control Technology for Toxics
ULN	Ultra Low NOx
U.S. EPA	United States Environmental Protection Agency
$\mu g/m^3$	Microgram per cubic meter
VOC	Volatile organic compounds

AIR QUALITY APPENDIX AQ-1
Greenhouse Gas Emissions
Testimony of William Walters

Staff has obtained and is now using another data source for the average WECC heat rate that was presented in **Greenhouse Gas Table 5**. To be consistent with other staff assessments currently in preparation, staff is providing this updated data in this FSA supplement. The updated heat rate data using this source is provided in the updated **Greenhouse Gas Table 5** below.

Greenhouse Gas Table 5
Weighted Average Heat Rate for Operating Natural Gas-Fired Plants[1] in the WECC and California 2010-2013

Year	Average WECC Heat Rate [2] (MMBtu/kWh)	Average CA Heat Rate [3] (MMBtu/kWh)
2010	7,791	7,628
2011	8,038	7,879
2012	7,965	7,808
2013	7,874	7,664
2014	7,862	

[1] Excludes cogeneration facilities
[2] Staff derived from EIA Form 923.
[3] Thermal Efficiency of Gas-Fired Generation in California: 2014 Update, CEC-200-2014-005, September 2014 (CEC 2014b)

These marginal changes to the average WECC heat rates do not affect staff's findings for Greenhouse Gas Emissions.

REBUTTAL TESTIMONY

The following rebuttal testimony reflects Staff's responses to testimony filed by the following parties:

- **Project Owner / J McKenzie (tn: 203811).** Written Testimony. 3/11/2015 http://docketpublic.energy.ca.gov/PublicDocuments/07-AFC-06C/TN203811_20150310T162445_Project_Owner's_Written_Testimony.pdf

- **Power of Vision / J Baker (tn: 203856).** Opening Testimony. 3/12/2015 http://docketpublic.energy.ca.gov/PublicDocuments/07-AFC-06C/TN203856_20150312T113204_Power_of_Vision_Testimony.pdf

- **Terramar Neighborhood Association / K Seikemann (tn: 203851).** FSA Testimony. 3/11/2015 http://docketpublic.energy.ca.gov/PublicDocuments/07-AFC-06C/TN203851_20150311T205338_Terramar_Testimony_Exhibit_List.pdf

- **City of Carlsbad (tn: 203845).** Direct Testimony (sponsored by Energy Commission Staff) 3/11/2015 http://docketpublic.energy.ca.gov/PublicDocuments/07-AFC-06C/TN203845_20150311T160425_City_of_Carlsbad_Prepared_Testimony.pdf

Testimony comprises responses, updated figures, and where appropriate, changes to conditions of certification. Changes to the conditions of certification from the FSA are **bold double underlined** and ~~double strikethrough.~~ Changes between the licensed CECP and the FSA still appear in single ~~strikethrough~~, with new text **bold and underlined**.

AIR QUALITY

Air Quality Rebuttal Testimony of William Walters

RESPONSE TO PETITIONER'S TESTIMONY

Comment: The applicant's testimony sponsored by Gary Rubinstein discusses the project baseline and the different context of baseline between the SDAPCD NSR permitting and USEPA PSD permitting.

Staff's Response: Staff generally agrees with the concepts presented with the SDAPCD NSR permitting baseline discussion but has an issue with one of the USEPA PSD baseline conclusions provided on page 4 that notes the following:

> *A determination of a baseline period is not required to support the conclusion that ACECP is not subject to federal PSD review.*

Staff's issue with this statement may be able to be addressed by additional clarification by the petitioner. The project's emissions alone clearly exceed the major modification threshold for NOx, so a determination of existing EPS baseline certainly appears to be

required to determine the project's net emissions increase and so properly determine PSD permitting status under USEPA rules and regulations. However, staff agrees with the following statement that notes that a representativeness analysis is not required under USEPA PSD rules, and staff agrees with the overall finding that the amended CECP does not trigger PSD permitting under USEPA rules.

RESPONSES TO TERRAMAR'S TESTIMONY

Comment: In its testimony of March 11, 2015, the Terramar Association notes that the Encina Power Station baseline should be based on a 5-year average and not the 2-year average selected in the PDOC, and notes that use of a 5-year average would affect: 1) the New Source Review (NSR) permitting and offset requirements, and 2) create the need to obtain a PSD permit and trigger the associated secondary PM2.5 modeling and other requirements related to PSD permitting.

Staff's Response: Staff agrees with 5-year baseline mathematics provided by Terramar, where if the 5-year period was used, established baseline and the current permit emissions limits were maintained, the project would trigger both offsets through NSR and PSD permitting. The District completed a thorough review to determine whether the baseline years selected were representative, and their finding was that they could not be determined to be representative in all certainty, nor could any other two year period, so per District regulations they did in fact change the base line to a 5-year average. This is explained in more depth in the Air Quality FSA Supplement.

However, there are two fundamental concepts that weren't discussed in Terramar's comments regarding PSD applicability. The petitioner only had to marginally lower the annual NOx emissions limit for the amended CECP to maintain the NOx emissions increase below the PSD permit trigger of 40 tons using the EPS 5-year average emissions base line. This is what the petitioner has done and the project's emissions increase would remain below the PSD permit trigger under District rules. Second, and more importantly, the District does not have authority for PSD permitting; the U.S. EPA has that authority. The federal PSD rules are not the same as the District's and are generally more lenient when it comes to base line emissions for project modifications. Therefore, it is staff's conclusion that the project as modified in the FDOC does not trigger PSD permitting.

Comment: Additionally, in its March 11, 2015 testimony (p. 13) Terramar Association notes:

> *Terramar residents will be very aware of this rule on Specific Air Contaminants during the five-year project. We ask the District to inform us of the penalty that is enforced if this rule is broken. We ask who will enforce this rule and how.*

Staff's Response: This simple answer to Terramar's question is that both the Energy Commission and the District would be responsible for enforcing compliance with Rule 55. The Energy Commission is responsible under CEQA to ensure compliance with the project's approved mitigation measures which include compliance with fugitive dust mitigation measures that are in part meant to ensure compliance with LORS. In this instance, during amended CECP construction and EPS demolition, there would be a qualified onsite air quality mitigation manager, as required under Condition of Certification

AQ-SC1, to ensure compliance with the air quality mitigation measures that are applicable during construction and demolition. The Energy Commission would also assign a Compliance Project Manager who would oversee all aspects of project compliance during the amended CECP construction and EPS demolition, and who would be in contact with the onsite air quality mitigation manager to address any compliance issues that may arise, including addressing community complaints.

Staff is pleased to hear that the Terramar residents are aware of the requirements of District Rule 55 and encourages their participation towards project compliance with condition of certification and District rules when necessary, because the community can aid in ensuring project compliance by informing both the Energy Commission and District regarding potential non-compliance events. The specific format and methods for registering complaints varies between the Energy Commission and the District, but Energy Commission compliance staff can help Terramar understand how to register complaints with the Energy Commission.

Air Quality Rebuttal Testimony of David Vidaver

Comment: In its testimony of March 11, 2015, the Terramar Association states:

> *The purpose of the Amended CECP is, in part, to replace electricity generation lost from the shuttered of San Onofre Plant. Terramar disagrees that the ACECP could create a net cumulative reduction in GHG emissions, as San Onofre had no greenhouse gas emissions and the ACECP is fossil fuel driven.*[2]

Staff's Response: Staff's comparison of GHG emissions is not between an electricity system with a) the San Onofre plant operating, and b) one in that the San Onofre plant is closed and the amended CECP is operating. Staff's FSA testimony compares the GHG emission from two electricity generation systems with the San Onofre plant closed, differing only in that one includes the amended CECP facility and the other does not. As explained in the FSA, the addition of the CECP to the existing set of generation resources will result in lower GHG emissions, because CECP will operate only when it displaces less efficient gas-fired generation.

Comment: The Terramar Association states in their March 11, 2015 testimony that:

> *Terramar insists that SDG&E's tolling agreement with NRG interferes with the generation of new renewables. The CPUC clearly stated in their Track #4 decision that the 300-600MW of needed generation could be either renewable or fossil fuel. SDG&E chose 100% fossil fuel generation for all 600 MW. Since SDG&E offered their tolling agreement without an RFO, Terramar suggests their action interfered with the Avenal Decision as there was no opportunity for the generation to be fulfilled with renewables and the Track 4 decision from the CPUC. CPUC confirmed*

[2] Terramar Testimony, Exhibit List, Terramar Association, Docket 07-AFC-06C, March 11, 2015, p. 11

this by denying the SDG&E tolling agreement with the ACECP. CPUC said there must be an RFO that allows bids from all types of generation.[3]

Staff's Response: The tolling agreement between NRG and SDG&E was the basis of the CPUC's recent DRAFT decision requiring SDG&E to re-evaluate the renewables development responses to its recently-completed Request for Offers. Importantly, should the contract have been approved and cost-effective preferred resources in excess of the 200 MW minimum target established by the CPUC in D.14-03-004 been available, those preferred resources would not have entered into contracts with SDG&E, and thus been far less likely to have ever been developed. The CPUC's proposed decision, however, ensures that any cost-effective renewables that can be developed in a timely fashion will receive contracts from SDG&E.

Comment: The Terramar Association testimony further states:

Per the denial by the CPUC, the ACECP cannot be licensed at this time as it is interfering with the integration of new renewable generation.[4]

Staff's Response: The licensing and operation of the amended CECP would not interfere with renewable generation. Should the CPUC find cost-effective preferred resources available from the SDG&E RFO in amounts up to 800 MW, each of these resources could receive a contract from SDG&E regardless of whether the amended CECP is constructed or not. Should the RFO indicate the existence of more than 800 MW of cost-effective preferred resources, the amended CECP might not be awarded a contract for any share of its capacity. Those renewable generation resources that do not receive a contract would be able to sell output into spot energy markets, without a contract or power purchase agreement.

AIR QUALITY PROPOSED CONDITIONS OF CERTIFICATION

Staff recommends the modified conditions of certification to address the impacts associated with the construction and operation of the amended CECP, as contained in the attached Appendix A. These conditions include the SDAPCD conditions from the FDOC, with appropriate staff-proposed verification language added for each condition, as well as Energy Commission staff-proposed conditions. The temporary activities covered under approval of the PTR would be subject to the construction/demolition conditions only, while the temporary and long-term operation activities covered under approval of the PTA for the amended CECP are subject to all of the proposed conditions of certification.

ALTERNATIVES

Rebuttal Testimony of David Vidaver

[3] *Ibid.*

[4] *Op cit, p.12*

RESPONSES TO TERRAMAR'S TESTIMONY

Comment: In its testimony of March 11, 2015, the Terramar Association states:

> *The purpose of the Amended CECP is, in part, to replace electricity generation lost from the shuttered of San Onofre Plant. Terramar disagrees that the ACECP could create a net cumulative reduction in GHG emissions, as San Onofre had no green house gas emissions and the ACECP is fossil fuel driven.*[5]

Staff's Response: Staff's comparison of GHG emissions is not between an electricity system with the San Onofre plant operating and one in which the San Onofre plant is closed and the amended CECP is operating. Staff compares the GHG emission from two systems in which the San Onofre plant is closed, differing only in that one includes the amended CECP facility and the other does not.

Comment: The Terramar Association states:

> *Terramar insists that SDG&E's tolling agreement with NRG interferes with the generation of new renewables. The CPUC clearly stated in their Track #4 decision that the 300-600MW of needed generation could be either renewable or fossil fuel. SDG&E chose 100% fossil fuel generation for all 600 MW. Since SDG&E offered their tolling agreement without an RFO, Terramar suggests their action interfered with the Avenal Decision as there was no opportunity for the generation to be fulfilled with renewables and the Track 4 decision from the CPUC. CPUC confirmed this by denying the SDG&E tolling agreement with the ACECP. CPUC said there must be an RFO that allows bids from all types of generation.*[6]

Staff's Response: The tolling agreement between NRG and SDG&E was the basis of the CPUC's recent DRAFT decision requiring SDG&E to re-evaluate the renewables development responses to its recently-completed Request for Offers. Importantly, should the contract have been approved and cost-effective preferred resources in excess of the 200 MW minimum target established by the CPUC in D.14-03-004 been available, those preferred resources would not have entered into contracts with SDG&E, and thus been far less likely to have ever been developed. The CPUC's proposed decision, however, ensures that any cost-effective renewables that can be developed in a timely fashion will receive contracts from SDG&E.

Comment: The Terramar Association states:

> *Per the denial by the CPUC, the ACECP cannot be licensed at this time as it is interfering with the integration of new renewable generation.*[7]

[5] Terramar Testimony, Exhibit List, Terramar Association, Docket 07-AFC-06C, March 11, 2015, p. 11

[6] *Ibid.*

[7] *Op cit, p.12*

Staff's Response: The licensing and operation of the amended CECP would not interfere with renewable generation. Should the CPUC find cost-effective preferred resources available from the SDG&E RFO in amounts up to 800 MW, each of these resources would be considered in the loading order ahead of the CECP to receive a contract from SDG&E regardless of whether the amended CECP is constructed or not. Should the RFO indicate the existence of more than 800 MW of cost-effective preferred resources, the amended CECP will not be awarded a contract for any share of its capacity, and those renewable generation resources that do not receive a contract will be able to sell output into spot energy markets.

NOISE & VIBRATION

Rebuttal Testimony of Edward Brady, Joseph Hughes, and Shahab Khoshmashrab

RESPONSE TO PETITIONER'S TESTIMONY

Comment: Noisy construction work is defined as any project-related work that draws a noise compliant caused by construction or demolition activities associated with the amended CECP. In order to effectively manage this project, and to ensure compliance with the conditions of certification, the petitioner suggests that Condition of Certification **NOISE-6** be modified for clarity. First, the petitioner proposes removing the extraneous definition of "project-related noise complaint." Second, the petitioner suggests changing the phrase "as verified by the CPM" to "as determined by the CPM pursuant to **NOISE-2**." The petitioner believes that the internal reference to **NOISE-2**, which sets forth the procedure for investigating a noise complaint, is the most effective way of managing compliance.

Staff's Response: While **NOISE-2** does not explicitly define the term "project-related noise complaint", it does define the procedure for investigating a noise complaint. The first sentence in the last paragraph of **NOISE-6** (as seen below) refers to noisy construction work as one that draws a complaint, is the result of the project (activities and/or components) as opposed to another source, and is determined by the CPM to be project-related. These important steps in managing compliance are already identified in both **NOISE-2** and **NOISE-6**, and thus, the second sentence in this paragraph, suggested by the petitioner to be removed, seems unnecessary. So, staff agrees with the petitioner's changes and has revised **NOISE-6** accordingly, as reflected in the conditions of certification in Appendix A.

RESPONSES TO TERRAMAR'S TESTIMONY

Comment: Terramar would like to be informed by staff or the appropriate official when the "precise noise mitigation measures" are developed by the construction contractor in the noise certifications for construction as discussed as part of the demolition of the Encina Power Station (EPS) section.

Staff's Response: There are no conditions of certification that contain a notification process related to the noise mitigation plan for demolition of the EPS. However, Condition of Certification **NOISE-1** requires notifying the community when the demolition activities

begin, and Condition of Certification **NOISE-6** restricts the construction time to daytime hours. Precise noise mitigation measures would be developed by the project's construction contractor and would be based on factors such as additional wind loading and other safety considerations. Blasting mats or similar structures may be used to reduce the impact of falling debris inside the stack. However, the mitigation approaches employed would depend on the sources of noise that warrant such mitigation.

Staff does not typically require a notification process for such mitigation plans, since the effectiveness or ineffectiveness of any of their mitigation measures are usually verified through the noise complaint process described in Condition of Certification **NOISE-2**. If no related complaint is filed, mitigation will have proven effective. And if a complaint is filed, **NOISE-2** requires that the project owner conduct an investigation to determine the source of noise related to the complaint, take all feasible measures to reduce the noise at its source if the noise is project related, and submit a report documenting the complaint and the actions taken to mitigate such impact.

Comment: Pile driving is probably the most annoying noise and vibration activity that will be part of the construction aspect of the project. Terramar thanks staff for **NOISE-8** conditions and hopes that they are enough to mitigate this activity. Terramar requests that staff condition the project owner to notify the one mile radius properties of the dates and times of pile driving activity.

Staff's Response: Although start dates and times are generally included as part of the notification requirement sent out by project owners, as currently written, Condition of Certification **NOISE-8** does not explicitly require this. Staff agrees with Terramar that clarifying language be added to Condition of Certification **NOISE-8** that explicitly requires the project owner to indicate the expected start date, times, and duration of pile driving activities. To accommodate Terramar's request, staff proposes amending **NOISE-8** as reflected in the attached Appendix A.

Comment: There are four additional turbine generators; Exhibit #3003, Noise & Vibration page 4.7-16.

Staff's Response: The amended CECP would replace the two Siemens 5000F class natural gas-fired combustion turbine generators (CTGs) and two steam turbine generators, a total of four turbine generators, with six GE LMS100 natural gas-fired CTGs. There would be an additional two turbine generators associated with the amended CECP.

Comment: Terramar requests continued balancing for the life of the project to avoid tonal noise and vibration in later years. Terramar requests staff to add to Condition of Certification **NOISE-4** the continued balancing of noise emissions and testing during the life of the project.

Staff's Response: Tonal noises and vibration for the life of the project would be controlled with **NOISE-2** (Noise Complaint Process) and **NOISE-4** (Noise Restrictions). The project owner must include tonal noise testing in its operational survey. As a matter of practice, turbine generators are fitted with accelerometers or similar *in situ* sensors to preempt the risk of major mechanical failure. Follow-up vibration testing for operation would not be needed since the likelihood of multiple occurrences of any detectable vibration events at

the project's surrounding communities, more than 2,000 feet away, is minimal. No known failure tendency exists that justifies the need for ongoing or periodic testing for modern power plants such as the amended CECP, since they are not likely to cause vibration frequently.

Equipment vibration means potential for breakdown of major equipment, replacement or repair. These would be both expensive and time consuming and potentially cause the shutdown of the plant for long periods of time. This shutdown could result in further financial loss. So, understandably, there is much incentive for the project owner to maintain equipment balance throughout the life of the project. Equipment properly balanced would be more safe, reliable, and efficient, and not likely create vibration and tonal noises.

If vibration or tonal noises ever become a concern to surrounding communities, most likely, complaints will be filed which must be resolved in accordance with **NOISE-2**. At that time, first, it would be determined which piece of equipment would need to be repaired or replaced to alleviate the concern. Then, the resolution (equipment repair or replacement) must be implemented and post-resolution testing must be performed to verify its effectiveness, as required by **NOISE-2**. This process is the Energy Commission's generally accepted industry practice and has worked well for past power plant projects.

Requiring ongoing or periodic testing of equipment noise and vibration is neither necessary nor suggested by generally accepted industry practice, as the preferred method of compliance. Staff concludes that the noise and vibration conditions of certification do not need to be revised to add this requirement.

SOIL & WATER RESOURCES

Rebuttal Testimony of Mike Conway and Marylou Taylor

RESPONSE TO PETITIONER'S TESTIMONY

Comment: The project owner proposes deletion of the last sentence in the first paragraph of **SOIL&WATER-6**: "Recycled water shall also be used for EPS demolition." The sentence can be interpreted to be in conflict with the more detailed requirements for the use of recycled water that are found in **SOIL&WATER-2** and **-5**. Further, the reference to recycled water in **SOIL&WATER-6** is redundant and duplicative.

Staff's Response: Staff agrees the sentence is out-of-place in **SOIL&WATER-6** and can be deleted, with no effects to **SOIL&WATER-6**. Staff recommends changes to **SOIL&WATER-2** and **-5** to indicate that potable water is allowed for EPS decommissioning and demolition activities and makes clear that its use counts toward the 300 acre-feet limit in **SOIL&WATER-6**.

SOIL&WATER-2 requires recycled water for construction (including EPS demolition) when the city of Carlsbad extends the recycled water pipe to the project site and recycled water is hooked-up for use. Because recycled water is scheduled to be available by summer 2017, use of potable water is expected during most of the CECP construction. However,

because EPS demolition would occur only after the CECP begins operations, all EPS demolition is expected to use recycled water (for activities suitable for non-potable water). If recycled water is unexpectedly delayed, **SOIL&WATER-6** gives the CECP the opportunity to start power plant operation prior to receiving an adequate recycled water supply. The same provision applies to use of potable water for EPS demolition, which would also contribute toward the cumulative 300 acre-feet threshold described in **SOIL&WATER-6**.

Staff is recommending the revisions to **SOIL&WATER-2**, **-5**, and **-6**, as shown in the attached Appendix A.

TRAFFIC & TRANSPORTATION

Rebuttal Testimony of Andrea Koch

RESPONSE TO TERRAMAR'S TESTIMONY

Comment: Petitioner requested a change to Condition of Certification, **TRANS-1**.

Staff's Response: In the FSA, staff included language in **TRANS-1** requiring that large trucks heading eastbound on Cannon Road exit the project site via Avenida Encinas, not the SDG&E Service Gate, to alleviate Terramar's concerns that large trucks could block the railroad tracks while turning, especially during periods of traffic congestion. The project owner opposed this restriction in their written Testimony, suggesting alternative language which would require the traffic control plan to include "safety considerations related to large vehicles…to avoid possible blockage of the railroad tracks".

Jon Kim, Associate Engineer with the city of Carlsbad, stated in an e-mail dated January 22, 2015 that he thought it unnecessary to prohibit trucks traveling eastbound on Cannon Road from exiting via the SDG&E Service Gate. He stated that conditions had changed since the truck incident cited by Terramar:

"From my understanding, the truck incident occurred during the temporary traffic control that was in place for the desalination pipeline construction. K-rail was used to delineate the work area and the number of lanes was reduced from 2 lanes + bike lane in each direction to one lane in each direction. Now that Cannon Road has been restored to normal conditions, I don't have a concern about large trucks at the railroad crossing" (CEC2015t).

Taking into consideration the fact that Mr. Kim does not think trucks would block the railroad tracks, staff is proposing to remove the **TRANS-1** language prohibiting trucks traveling eastbound on Cannon Road from exiting via the SDG&E Service Gate. However, staff appreciates Terramar's concerns and acknowledges that safety is very important near railroad tracks. As a result, staff is proposing to modify **TRANS-1** to include language similar to that proposed by the project owner, as shown in the attached Appendix A.

Staff notes that this new language, while not fully restricting trucks from exiting via the SDG&E Service Gate to travel eastbound on Cannon Road, requires that the Traffic Control Plan include safety considerations for trucks using this route. Safety considerations

could include such items as using a flag person at the SDG&E Service Gate exit to direct truck traffic or prohibiting large trucks from using this route during peak traffic periods. Energy Commission Traffic staff would review the Traffic Control Plan, including the safety plan for large trucks, during the compliance phase when the project owner submits the Traffic Control Plan to satisfy Condition of Certification **TRANS-1**.

VISUAL RESOURCES

Rebuttal Testimony of William Kanemoto

RESPONSE TO PETITIONER'S TESTIMONY

Comment: The project owner, in their opening testimony, disputed the need for a 20-foot wide or greater landscape buffer zone as part of the requirements of Condition VIS-5.

Staff's Response: Staff has specified a 20-foot wide buffer zone because we believe that a minimal planting area of roughly that dimension would be needed to fully accommodate the mature canopy of trees of the scale needed to adequately screen the large power plant features. Staff notes that it is not enough to provide room for the tree trunks, but the branching of the mature canopy as well. That being the case, 20' would appear to be a very modest dimension to accommodate the scale of screening needed to address views of 100' transmission poles, exhaust stacks, etc. Staff understands that some flexibility could be needed in constrained segments of the site boundary, and has modified the wording of Condition **VIS-5** to allow for exceptions to this requirement with the review and approval of the CPM. However, staff does not wish to imply license to reduce the width of the needed planting area throughout since, in staff's opinion, such a reduction in width of the buffer throughout could lead to practical problems and reduced effectiveness of the screening. As noted above, various possible versions of Scenario C are capable of providing the full stipulated 20'-wide buffer, or wider, throughout. In fact, versions of Scenario C could provide a substantially wider and more flexible buffer zone, which would be highly desirable.

RESPONSE TO POWER OF VISION'S (POV) TESTIMONY

Comment: In its opening testimony, POV stated there would not be adequate room to accommodate the buffer zone requirements of Condition of Certification **VIS-5**, pertaining to future cumulative impacts with the I-5 Widening Project. Specifically, POV states that the right-of-way (ROW) requirements of the future I-5 expansion project (based in part on a conversation held with Caltrans staff on February 23, 2015 , tn: 203790) would preclude a buffer zone between the proposed widened I-5 and the amended CECP's proposed upper rim road, as proposed in Condition **VIS-5**.

Staff's Response: Staff understands POV's concern regarding future impacts associated with the I-5 expansion, and acknowledges the highly constrained character of the eastern border of the CECP site near the I-5. Staff has analyzed the impact of I-5 expansion in relation to the amended CECP. Accordingly, in response to POV, the following rebuttal testimony and associated Figures are provided to help further clarify the issue provided in the February 17, 2015 Final Staff Assessment (FSA). The following will also facilitate the understanding and reasoning underlying the formulation of Condition **VIS-5**, and how its implementation will provide effective mitigation for future cumulative impacts

Attached **Figure 1** depicts the amended CECP layout as proposed, with a 20 ft. landscape buffer zone, as described in the FSA under Condition **VIS-5**. As shown, there is the likely possibility that a widened I-5 would result in two 'pinch points' along the northeastern edge of the proposed project, adjacent to existing AST's 6 and 7 (as noted by both Terramar and POV in their filed testimony), and along the upper rim road where proposed amended CECP f Units 6 through 9 would be constructed and operate. The pinch points would exist where the upper rim road abuts the presumed Caltrans ROW line after I-5 widening. At those pinch points, a portion of the 20'-wide landscape buffer zone called for in Condition VIS-5 could thus be eliminated following I-5 widening.

Despite the two "pinch points," effective mitigation is entirely feasible. This is more apparent by examining the future I-5 widening proposed boundaries. The proposed, future I-5 ROW line was not depicted in the digital (CAD) provided to staff by Caltrans (tn: 203475); the presumed ROW line shown in Figure 1 was drawn by the project applicant. However, the boundary as depicted by the project applicant shows a conservative "worst-case scenario" determination of the ROW alignment in that it extends further west into the proposed CECP project site than the grading line provided by Caltrans and shown in their CAD plans submission.

Figure 2 depicts a scenario ('Scenario A') in which the **VIS-5** buffer could be located entirely within the CECP site. As depicted, this scenario would require re-alignment of the upper rim road to make way for a buffer zone along the future I-5 ROW line. Such a road realignment would require tall retaining walls at the eastern side of the sub-grade 'bowl' in which the generation units would be located, as shown in red in both the plan and cross-section diagrams. Staff sees no reason why such walls would be infeasible. However in the layout shown, these walls would need to be quite tall (nearly 30 feet tall as shown in the diagram).

Figure 3 is a close-up of the same cross-section.

Figure 4 depicts an alternative scenario ('Scenario B') in which the VIS-5 buffer could be located entirely within the future Caltrans I-5 ROW. Under this scenario, the proposed layout of the Amended CECP could remain as proposed, and the security barrier required by Condition of Certification **WORKER SAFETY-7** would be located at the ROW line, as shown in the cross-section. Staff took representative measurements from the I-5 Widening

CAD files provided by Caltrans, of the distance from the *edge of proposed shoulder* to the *limit of grading line* shown on the same CAD files. (See Figure 8 below for close-up of Caltrans CAD file). These measurements, taken at sample points adjacent to the proposed generation unit locations, ranged from approximately 19 to 26 feet. However, the limit of grading line shown by Caltrans does not extend as far into the CECP site as the assumed ROW line shown on our figures. Thus, the width of this potential buffer area could be somewhat greater, at least in some locations, if one assumes the ROW line shown in the diagrams.

Staff believes this analysis provides a strong indication that the stipulated 20' landscape buffer might be accommodated entirely within the proposed Caltrans ROW.

Again, **Figure 5** is a close-up of the cross-section for Scenario B.

Figure 6 depicts an alternative scenario ('Scenario C') in which the VIS-5 buffer could be located on portions of both the CECP site and I-5 ROW as proposed. As depicted in the cross-section, this scenario could incorporate a partial realignment of the upper rim road in the areas of the 'pinch points,' similar to Scenario A. However, by incorporating portions of the widened I-5 ROW, the amount of road realignment needed could be much less. Consequently the length and height of the required retaining wall could also be much less. In addition, a further advantage of this scenario would be a potentially much wider landscape buffer zone than would be possible under Scenarios A or B. In fact, a possible version of Scenario C could entirely avoid the need for rim road realignment and still provide the stipulated 20' wide landscape buffer at the 'pinch points,' while providing a substantially wider and more flexible buffer zone at other points along the highway boundary. For these reasons, a version of Scenario C (buffer zone in both CECP site and I-5 ROW) would clearly be the most effective. It would also be substantially less costly and disruptive than Scenario A.

Figure 7 is a close-up of the cross-section diagram.

Figure 8 is the Caltrans CAD drawing of the 8+4 Buffer I-5 Widening Layout, with sample measurements of the width of the setback area between the proposed edge of paving/shoulder and proposed edge of project grading. The proposed ROW line is not shown in these drawings. However, since it can be assumed that the distance to ROW line would need to be at least as great as the widest limit of proposed grading, the ultimate setback is likely to be 26' or greater, more than enough room to accommodate a 20' wide landscape buffer zone within the Caltrans ROW alone. Landscape planting in the Caltrans ROW requires a safety barrier along the planted area, such as the 3' barrier shown in the inset cross-section, taken from the Caltrans I-5 Widening Project Design Guidelines.

Finally, **Figure 9**, taken from the I-5 Project Design Guidelines, depicts Caltrans' landscaping intent along the CECP site. Contrary to statements provided in the POV opening testimony, which were based on informal conversations with Caltrans staff, the

plan clearly shows the original intent of the I-5 project to establish 'Category 1' (native) landscaping in the ROW of the project along the CECP site boundary. These measures from the Design Guidelines in effect constitute a component of the mitigation measures identified in the I-5 Project Final Environmental Impact Statement (FEIS) and its associated Visual Impact Assessment Technical Report. The cumulative impact of the (licensed) CECP project in combination with the I-5 Widening Project was recognized as a significant cumulative visual impact in the I-5 Project FEIS (p. 3.25-25, I-5 NCCP FEIS).

Staff also submits the following exhibits, which were presented in the public workshop in Carlsbad during the PSA public comment period.

Figure 10 is an aerial photo plan view of the CECP site, overlaid with the existing and proposed I-5 ROW lines and shoulders/edges of paving, to further assist in understanding of the relationships along the site's eastern, I-5 boundary.

Figure 11 is a similar overlay on an aerial photo, showing proposed limits of laydown areas in relation to existing tree canopies. The figure illustrates potential construction/laydown impacts addressed in Condition **VIS-3**.

To address the concerns expressed by POV regarding visual impacts associated with the widening of I-5, staff proposes amendments to Condition of Certification **VIS-5** as shown in the attached Appendix A. In addition, a modification to Condition of Certification **VIS-1** is proposed by staff to correct the inadvertent omission of transmission poles from the measure, and to address concerns of intervenor POV about impacts of the transmission poles. The modification, also reflected in Appendix A, calls for color treatment of transmission poles as well as exhaust stacks.

WASTE MANAGEMENT

Rebuttal Testimony of Ellie Townsend-Hough

RESPONSE TO PETITIONER'S TESTIMONY

Comment: The petitioner's recommended changes to the Verification for condition of certification **WASTE-5**.

Staff's Response: Staff agrees with the changes. There are a number of facilities located in counties and cities across California that would allow this project to comply with the diversion and documentation requirements of CalGreen. Rather than require receipts from a facility certified by the city of San Diego, Project Owner proposes that the verification language requires Project Owner to submit the documentation required by CALGreen Title 24, California Code of Regulations, Part 11 section 5.408.1.4. This documentation would demonstrate to the Compliance Project Manager (CPM) that Project Owner is in compliance with statewide construction and demolition debris diversion standards

throughout the construction and demolition activities associated with the amended CECP. Staff is recommending revisions to the FSA version of **WASTE-5**, as shown in Appendix A.

WORKER SAFETY/FIRE PROTECTION

Rebuttal Testimony of Dr. Alvin Greenberg

RESPONSE TO PETITIONER'S TESTIMONY

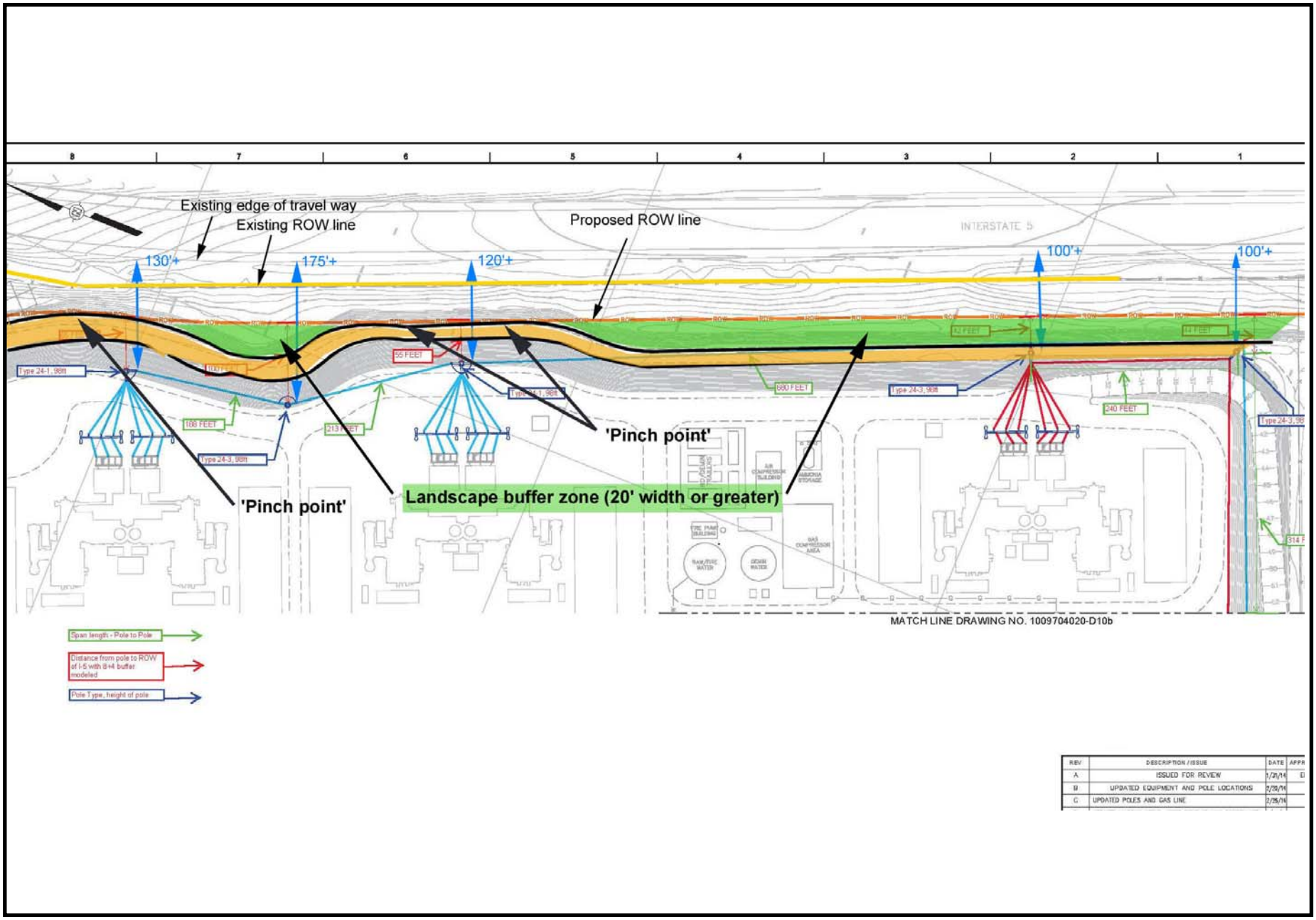
Comment: Petitioner requested changes to conditions of certification **WS-6, 7**, and **9**.

Staff's Response: Staff has reviewed the pre-filed written testimony of the petitioner regarding timing issues with Conditions **Worker Safety-6, 7,** and **9**. Staff understands the utility of the proposed revisions and has no objections. The proposed revisions are contained in the conditions of certification in Appendix A.

ATTACHMENT:
Visual Resources Figures 1-11
Appendix A – Conditions of Certification

VISUAL RESOURCES - FIGURE 1

Carlsbad Energy Center Project Amendment - Proposed amended CECP with Condition of Certification VIS-5



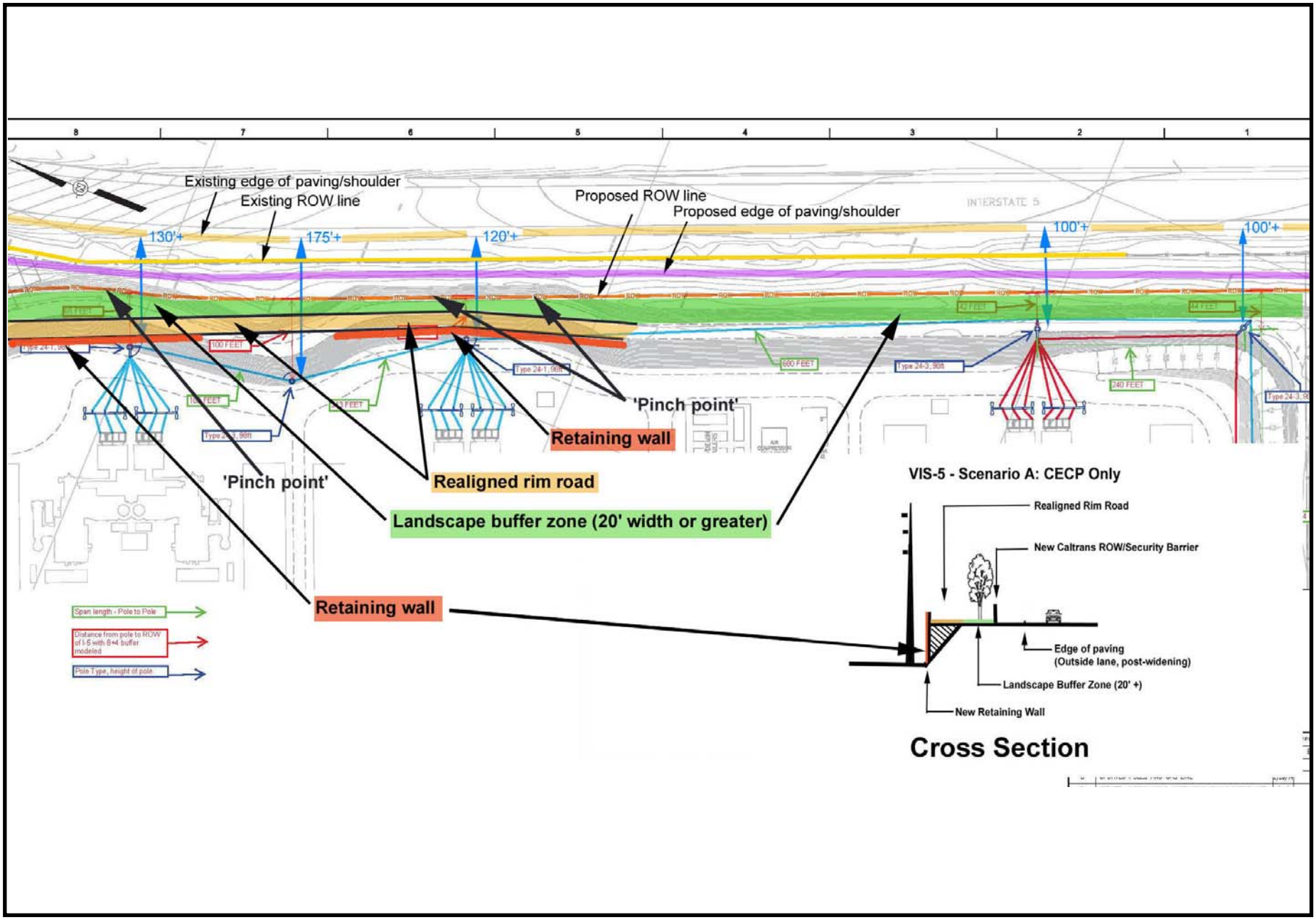
VISUAL RESOURCES

CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: BK

VISUAL RESOURCES - FIGURE 2

Carlsbad Energy Center Project Amendment - Condition VIS-5, Scenario A (CECP Site Only)



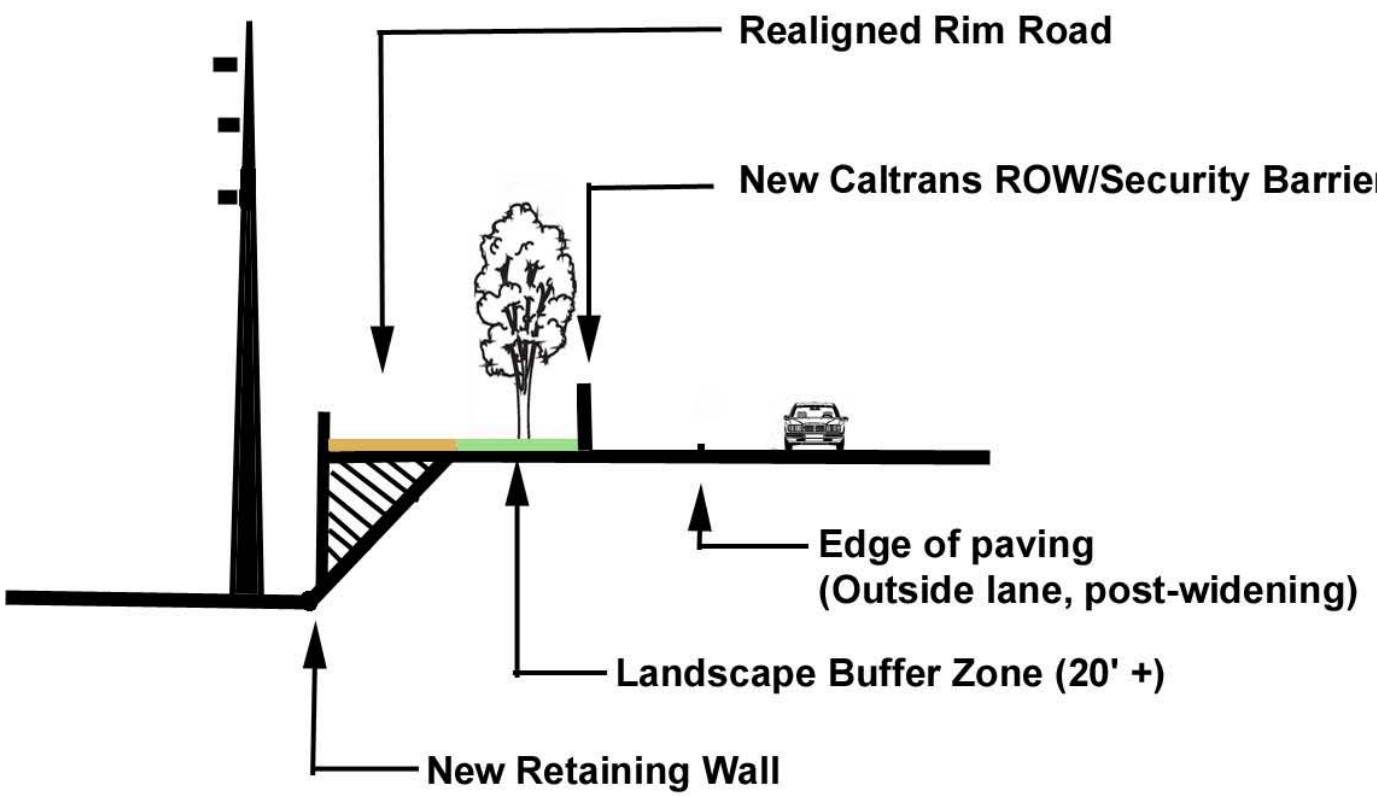
VISUAL RESOURCES

CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: BK

VISUAL RESOURCES - FIGURE 3

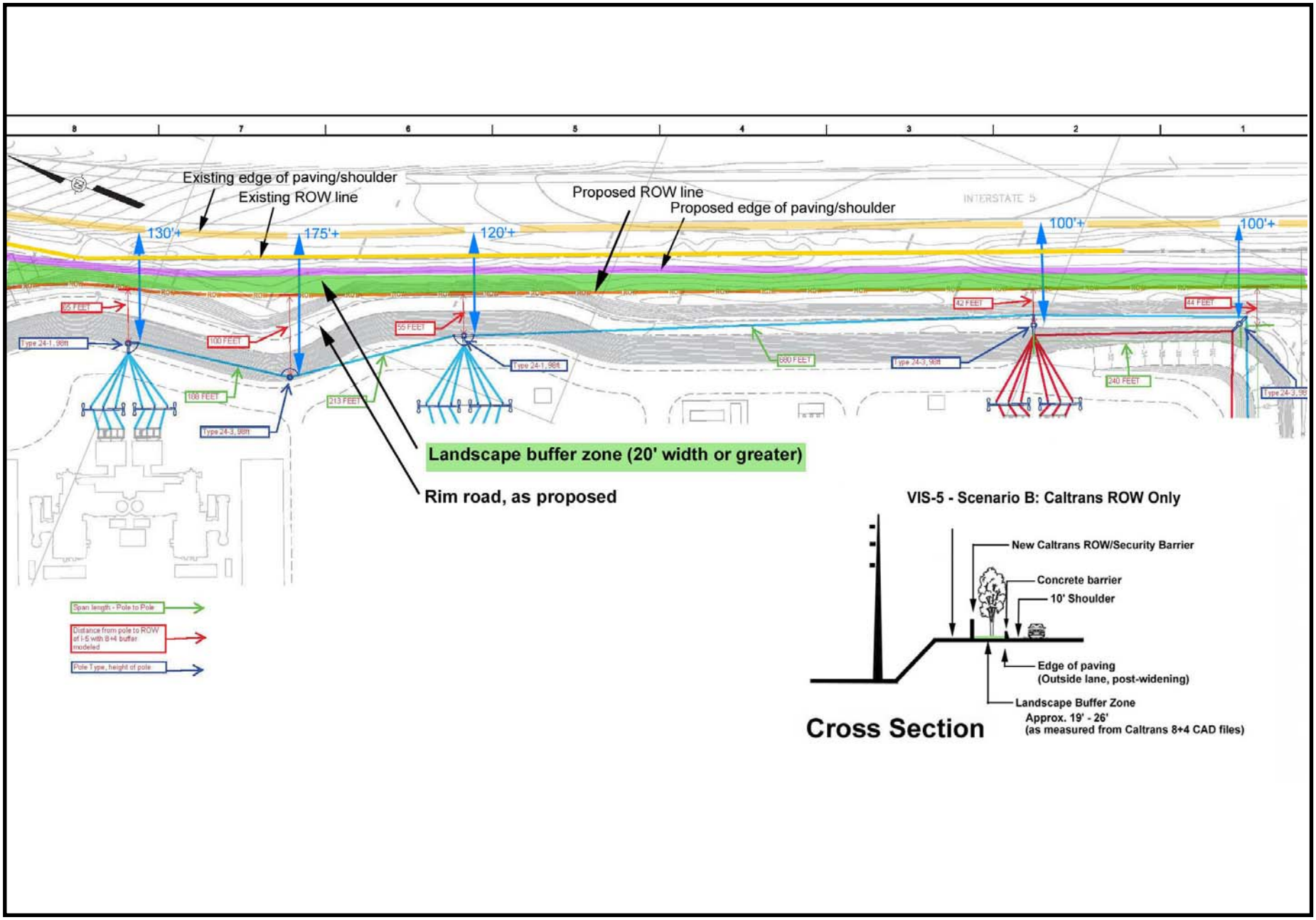
Carlsbad Energy Center Project Amendment - Conceptual Cross-Section, Condition VIS-5, Scenario A



SOURCE: BK

VISUAL RESOURCES - FIGURE 4

Carlsbad Energy Center Project Amendment - Condition VIS-5, Scenario B (Caltrans ROW Only)



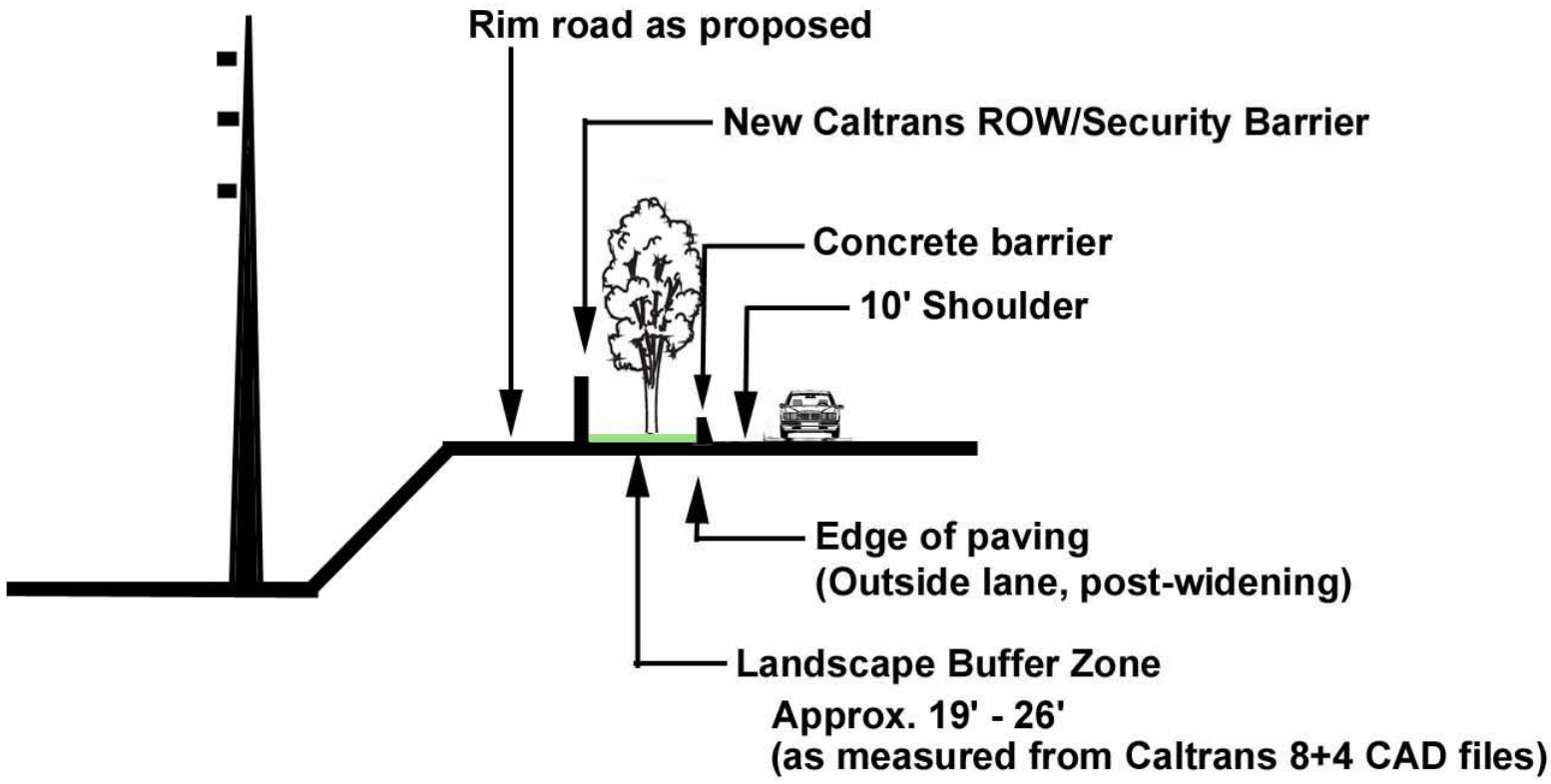
VISUAL RESOURCES

CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: BK

VISUAL RESOURCES - FIGURE 5

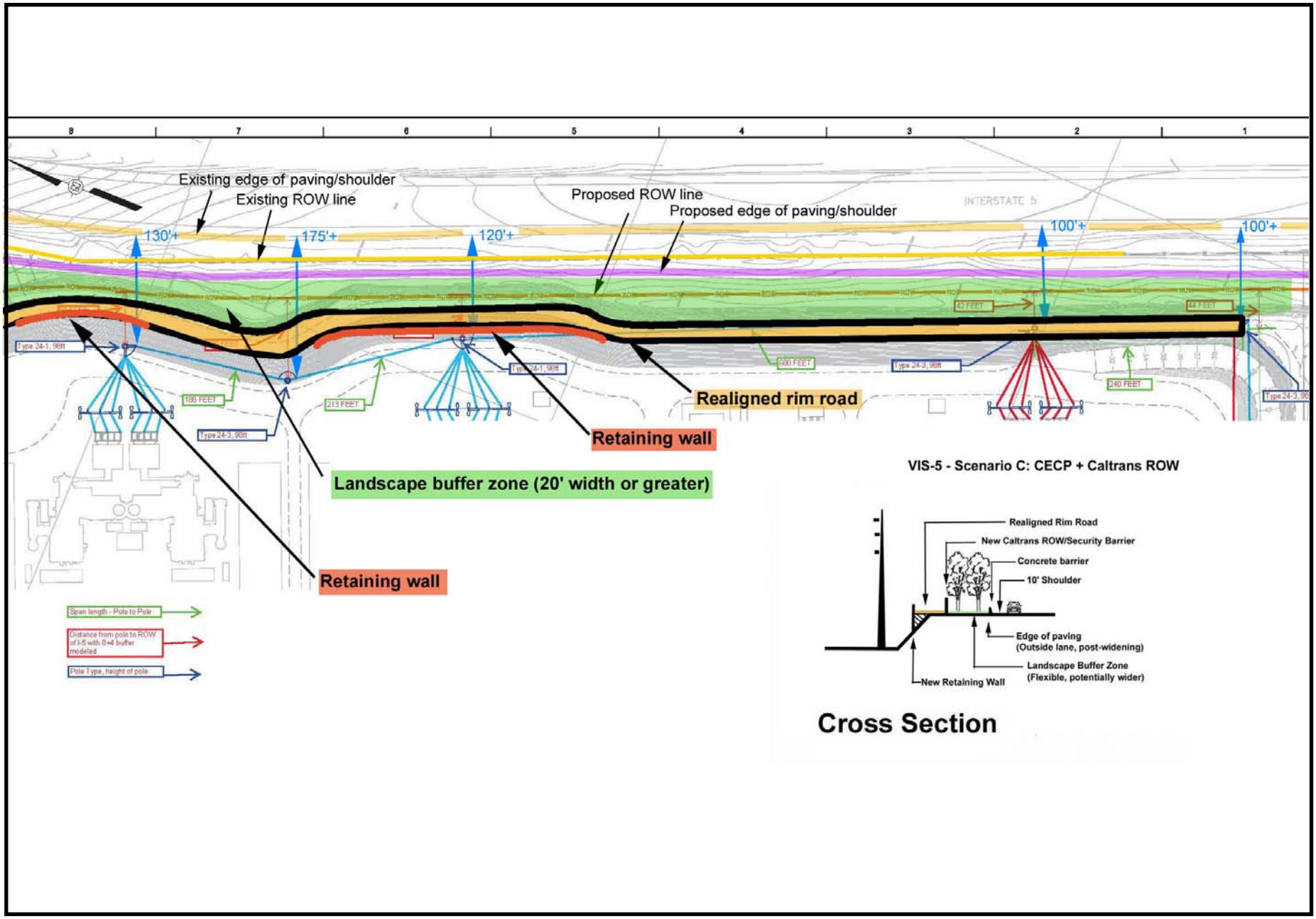
Carlsbad Energy Center Project Amendment - Conceptual Cross-Section, Condition VIS-5, Scenario B



SOURCE: BK

VISUAL RESOURCES - FIGURE 6

Carlsbad Energy Center Project Amendment - Condition VIS-5, Scenario C (Both CECP Site and Caltrans ROW)



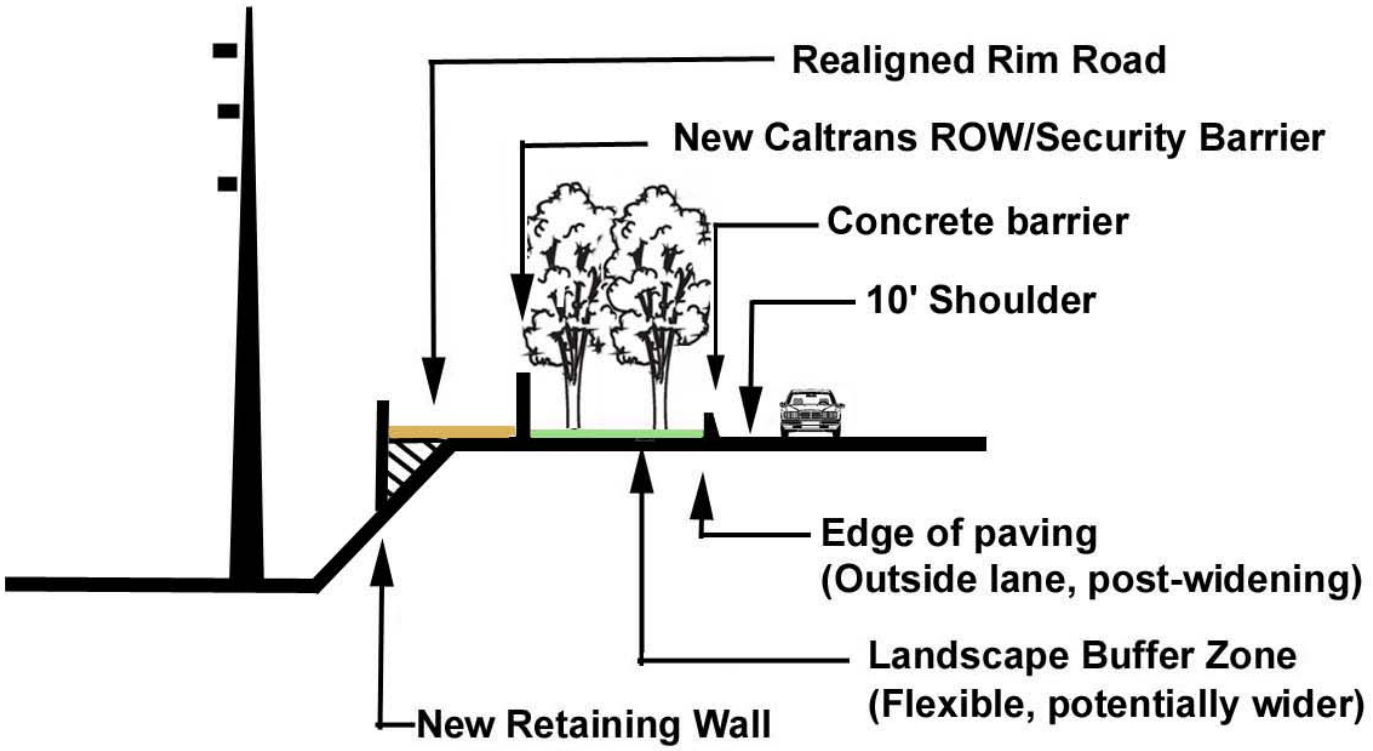
VISUAL RESOURCES

CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: BK

VISUAL RESOURCES - FIGURE 7

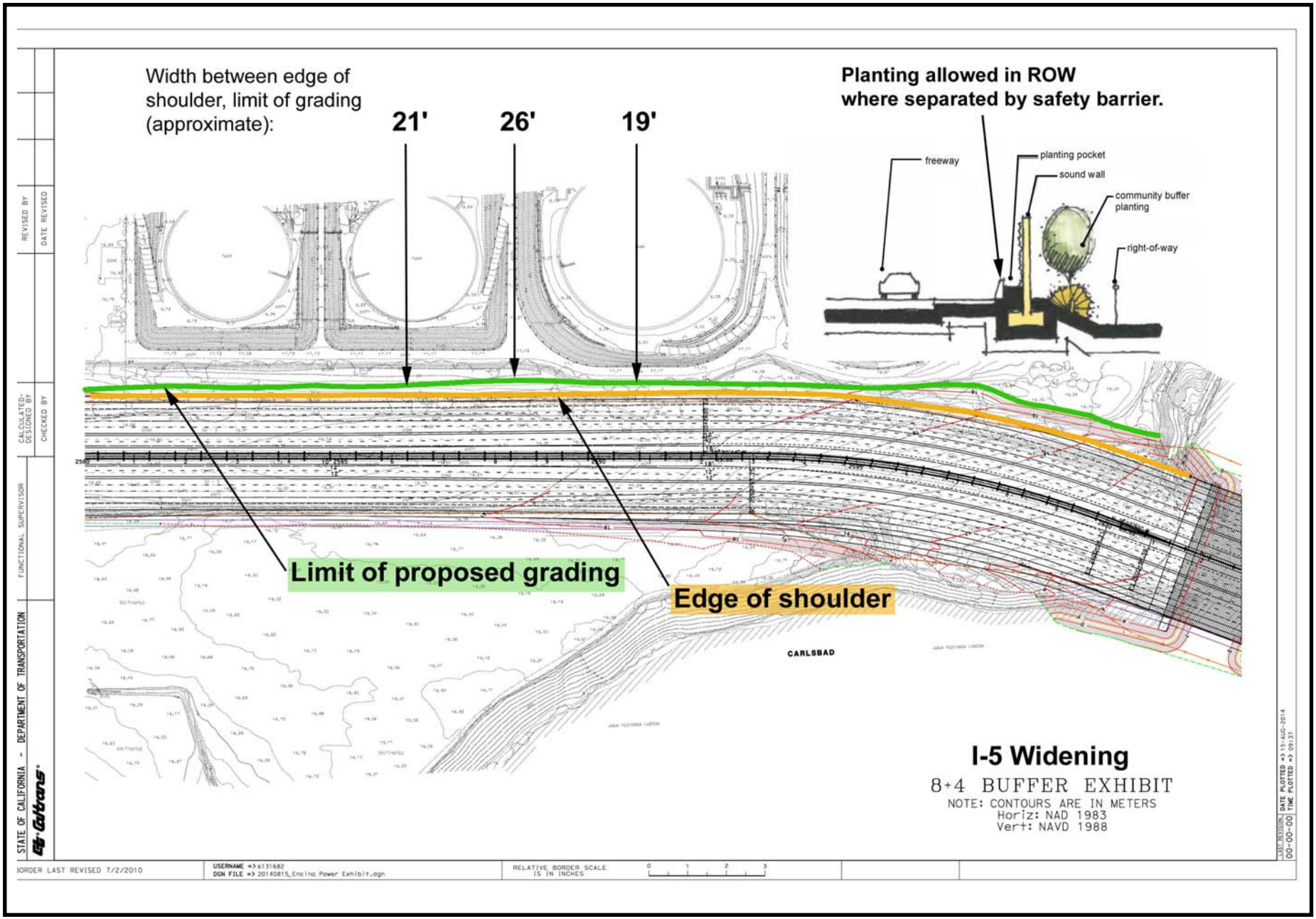
Carlsbad Energy Center Project Amendment - Conceptual Cross-Section, Condition VIS-5, Scenario B



SOURCE: BK

VISUAL RESOURCES - FIGURE 8

Carlsbad Energy Center Project Amendment - Caltrans CAD Drawing of I-5 Widening 8+4 Buffer (Preferred) Alternative



SOURCE: BK

VISUAL RESOURCES - FIGURE 9

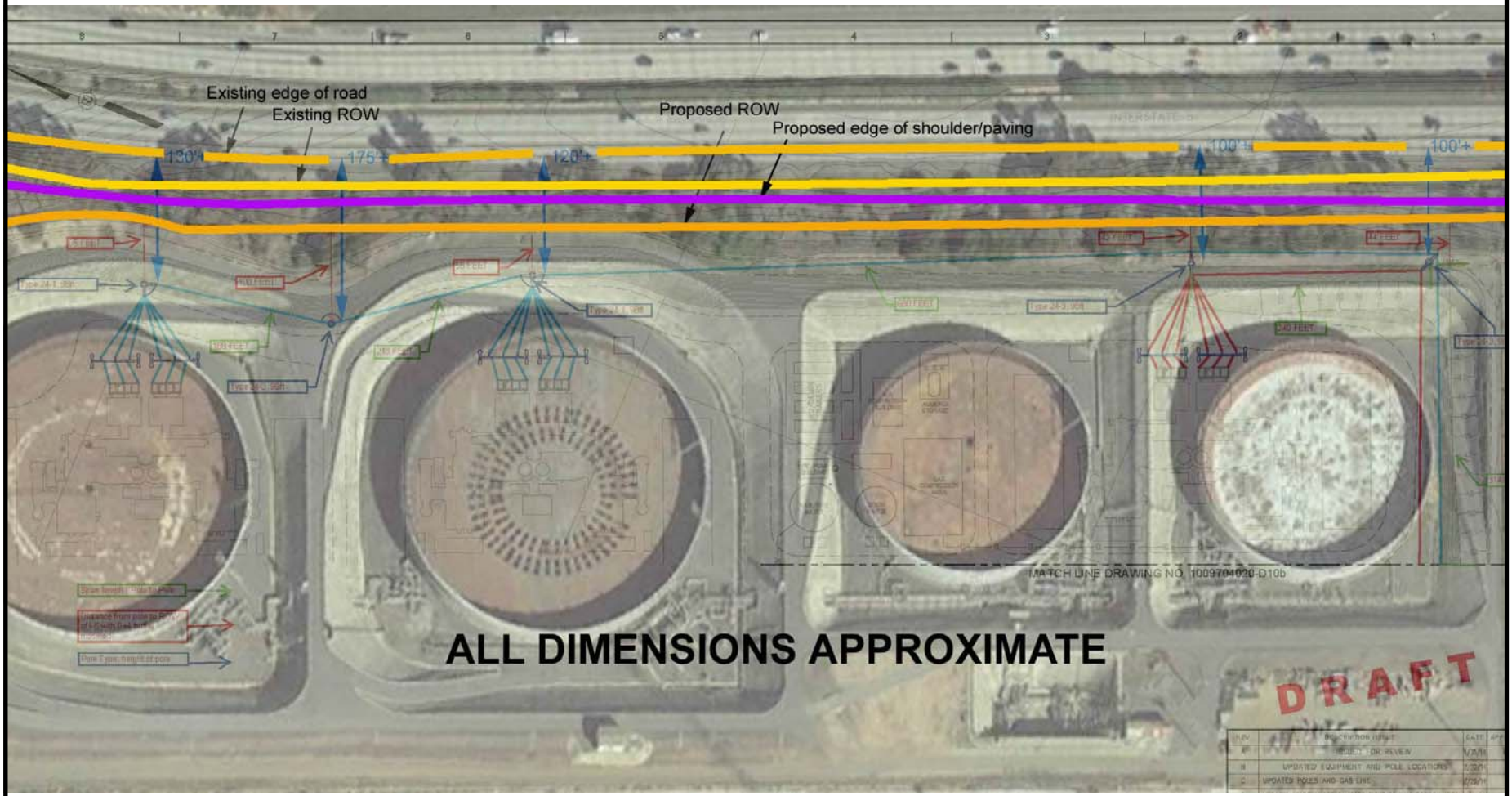
Carlsbad Energy Center Project Amendment - I-5 Widening Design Guidelines – ROW Landscaping

Category I (California Native): Used for revegetation near native habitat. California coastal native plants and hydroseed. No irrigation once established.
Category II (Native Transitional): Used at interchanges near native areas and at slopes with freeway walls. California natives/ cultivar plants and hydroseed receive minimal maintenance. Walls have no vines. Requires minimal irrigation once established.
Category III (Standard Landscape): Used at urban interchanges. California native/cultivar plants with mulch areas receive low maintenance once established. Requires low amounts of irrigation once established.
Category IV (Enhanced Landscape): Used at gateway interchanges and landscapes maintained by others. California native/ ornamental plantings receive regular maintenance and weeding. Decorative rock mulches and pavings are used. Above standard landscape in State right-of-way requires a Landscape Maintenance Agreement. Requires low amounts of irrigation.

SOURCE: BK

VISUAL RESOURCES - FIGURE 10

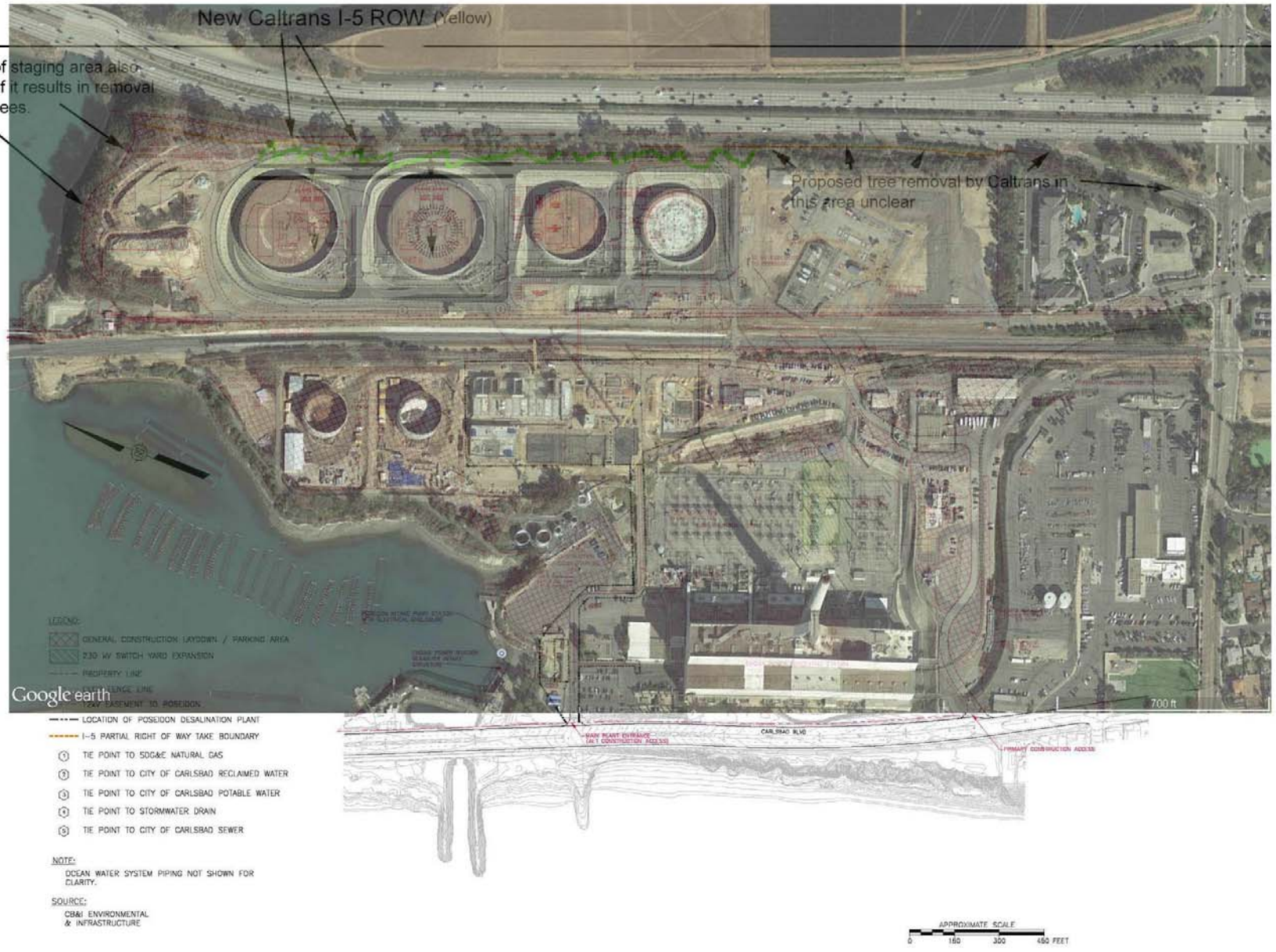
Carlsbad Energy Center Project Amendment - Aerial Plan View of I-5 Widening and CECP Site



SOURCE: BK

VISUAL RESOURCES - FIGURE 11

Carlsbad Energy Center Project Amendment - Overlay of Amended CECP Laydown Areas on Aerial Site Photo



VISUAL RESOURCES

CALIFORNIA ENERGY COMMISSION - SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: BK

APPENDIX A
CARLSBAD ENERGY CENTER PROJECT AMENDMENT (07-AFC-06C)

PROPOSED CONDITIONS OF CERTIFICATION

The conditions of certification below include approved conditions of certification from the licensed CECP related to construction and demolition and any modifications, additions or deletions required for the amended CECP. If pre-construction or demolition activities have been approved by the Energy Commission's Compliance Project Manager, and no changes are required for the amended CECP, then the project owner need not duplicate those previously approved activities. The work already performed is duly noted.

Note: Edits from the licensed CECP conditions that were included in the February 17, 2015 Final Staff Assessment (FSA) are indicated with deleted text in ~~strikethrough~~, and new text in **bold and underlined**. Edits made *after* publication of the FSA are indicated with deleted text in ~~double-strikethrough,~~ and new text is **bold and double underlined**).

AIR QUALITY

Staff recommends the following modified conditions of certification to address the impacts associated with the construction and operation of the amended CECP. These conditions include the SDAPCD proposed conditions from the DOC, with appropriate staff-proposed verification language added for each condition, as well as Energy Commission staff-proposed conditions. The temporary activities covered under approval of the PTR would be subject to the construction/demolition conditions only, while the temporary and long-term operation activities covered under approval of the PTA for the amended CECP are subject to all of the proposed conditions of certification.

STAFF CONDITIONS

AQ-SC1 Air Quality Construction**/Demolition** Mitigation Manager (AQCMM): The project owner shall designate and retain an on-site AQCMM who shall be responsible for directing and documenting compliance with conditions **AQ-SC3, AQ-SC4, and AQ-SC5** for the entire project site and linear facility construction**/demolition**. The on-site AQCMM may delegate responsibilities to one or more AQCMM Delegates. The AQCMM and AQCMM Delegates shall have full access to all areas of construction on the project site and linear facilities and shall have the authority to stop any or all construction**/demolition** activities as warranted by applicable construction**/demolition** mitigation conditions. The AQCMM and AQCMM Delegates may have other responsibilities in addition to those described in this condition. The AQCMM shall not be terminated without written consent of the Compliance Project Manager (CPM).

Verification: At least 60 days prior to the start of ground disturbance, the project owner shall submit to the CPM for approval the name, resume, qualifications, and contact information for the on-site AQCMM and all AQCMM Delegates. The AQCMM and all Delegates must be approved by the CPM before the start of ground disturbance.

AQ-SC2 Air Quality Construction**/Demolition** Mitigation Plan (AQCMP): The project owner shall provide an AQCMP, for approval, which details the steps that will be taken and the reporting requirements necessary to ensure compliance with conditions **AQ-SC3, AQ-SC4, and AQ-SC5**.

Verification: At least 60 days prior to the start of any ground disturbance, the project owner shall submit the AQCMP to the CPM for approval. The CPM will notify the project owner of any necessary modifications to the plan within 30 days from the date of receipt. The AQCMP must be approved by the CPM before the start of ground disturbance.

AQ-SC3 Construction Fugitive Dust Control: The AQCMM shall submit documentation to the CPM in each Monthly Compliance Report (MCR) that demonstrates compliance with the following mitigation measures for the purposes of preventing all fugitive dust plumes from leaving the project site and linear facility routes. Any deviation from the following mitigation measures shall require prior CPM notification and approval.

a) All unpaved roads and disturbed areas in the project and laydown construction**/demolition** sites shall be watered as frequently as necessary to comply with the dust mitigation objectives of AQ-SC4. The frequency of watering may be reduced or eliminated during periods of precipitation.

b) No vehicle shall exceed ten miles per hour on unpaved areas within the project and laydown construction**/demolition** sites.

c) The construction**/demolition** site entrances shall be posted with visible speed limit signs.

d) All construction**/demolition** equipment vehicle tires shall be inspected and washed as necessary to be cleaned and free of dirt prior to entering paved roadways.

e) Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.

f) All unpaved exits from the construction**/demolition** site shall be graveled or treated to prevent track-out to public roadways.

g) All construction**/demolition** vehicles shall enter the construction**/demolition** site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM.

h) Construction**/demolition** areas adjacent to any paved roadway shall be provided with sandbags or other measures as specified in the Storm Water Pollution Prevention Plan (SWPPP) to prevent runoff to roadways.

i) All paved roads within the construction**/demolition** site shall be swept at least twice daily (or less during periods of precipitation) on days when construction**/demolition** activity occurs to prevent the accumulation of dirt and debris.

j) At least the first 500 feet of any public roadway exiting the construction**/demolition** site shall be swept visually clean, using wet sweepers or air filtered dry vacuum sweepers, at least twice daily (or less during periods of precipitation) on days when construction**/demolition** activity occurs or on any other day when dirt or runoff from the construction**/demolition** site is visible on the public roadways.

k) All soil storage piles and disturbed areas that remain inactive for longer than ten days shall be covered or shall be treated with appropriate dust suppressant compounds.

l) All vehicles that are used to transport solid bulk material on public roadways and that have the potential to cause visible emissions shall be provided with a cover or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least two feet of freeboard.

m) Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) shall be used on all construction**/demolition** areas that may be disturbed. Any windbreaks installed to comply with this condition shall remain in place until the soil is stabilized or permanently covered with vegetation.

n) Disturbed areas will be re-vegetated as soon as practical.

o) Haul trucks used during the Encina Power Station demolition shall be limited to traveling on paved or graveled surfaces at all times within the boundary of the Encina Power Station property.

The fugitive dust requirements listed in this condition may be replaced with as stringent or more stringent methods as required by SDAPCD Rule 55.

Verification: The project owner shall include in the MCR**:** (1) a summary of all actions taken to maintain compliance with this condition, (2) copies of any complaints filed with the air district in relation to project construction**/demolition**, and (3) any other documentation deemed necessary by the CPM and AQCMM to verify compliance with

this condition. Such information may be provided via electronic format or disk at the project owner's discretion.

AQ-SC4 Dust Plume Response Requirement: The AQCMM or Delegate shall monitor all construction**/demolition** activities for visible dust plumes. Observations of visible dust plumes that have the potential to be transported**:** (1) off the project site**,** ~~or~~ (2) 200 feet beyond the centerline of the construction of linear facilities, (3) within 100 feet upwind of any regularly occupied structures not owned by the project owner, or (4) within 50 feet upwind of the I-5 freeway indicate that existing mitigation measures are not resulting in effective mitigation. The AQCMM or Delegate shall implement the following procedures for additional mitigation measures in the event that such visible dust plumes, other than those occurring upwind of the I-5 Freeway, are observed:

Step 1: The AQCMM or Delegate shall direct more intensive application of the existing mitigation methods within 15 minutes of making such a determination.

Step 2: The AQCMM or Delegate shall direct implementation of additional methods of dust suppression if Step 1 specified above fails to result in adequate mitigation within 30 minutes of the original determination.

Step 3: The AQCMM or Delegate shall direct a temporary shutdown of the activity causing the emissions if Step 2 specified above fails to result in effective mitigation within one hour of the original determination. The activity shall not restart until the AQCMM or Delegate is satisfied that appropriate additional mitigation or other site conditions have changed so that visual dust plumes will not result upon restarting the shut-down source. The owner/operator may appeal to the CPM any directive from the AQCMM or Delegate to shut down an activity, provided that the shutdown shall go into effect within one hour of the original determination, unless overruled by the CPM before that time.

The AQCMM or Delegate shall implement the following procedures for additional mitigation measures in the event that such visible dust plumes occurring **within 50 feet** upwind of the I-5 Freeway are observed:

Step 1: The AQCMM or Delegate shall immediately cease the activities causing the visible dust plumes if any obscuration of visibility is occurring to drivers on the I-5 freeway. The AQCMM or Delegate shall direct more intensive application of the existing mitigation methods immediately if the visible plumes are seen within 50 feet of the I-5 freeway but are not causing obscuration of visibility to drivers.

Step 2: The AQCMM or Delegate shall direct implementation of additional methods of dust suppression and monitor the start-up and/or continuation of the dust causing activities to ensure that the additional mitigation is effective.

Step 3: The AQCMM or Delegate shall direct a temporary shutdown of the activity causing the emissions if Step 2 specified above fails to result in effective mitigation. The activity shall not restart until the AQCMM or Delegate is satisfied that appropriate additional mitigation or other site conditions have changed so that visual dust plumes that could impact visibility on the I-5 Freeway will not occur upon restarting the shut-down **fugitive dust** source.

Verification: The AQCMP shall include a section detailing how the additional mitigation measures will be accomplished within the time limits or directions specified.

AQ-SC5 Diesel-Fueled Engine Control: The AQCMM shall submit to the CPM, in the Monthly Compliance Report, a construction**/demolition** mitigation report that demonstrates compliance with the AQCMP mitigation measures for purposes of controlling diesel construction**/demolition**-related emissions. The following off-road diesel construction**/demolition** equipment mitigation measures shall be included in the Air Quality Construction Mitigation Plan (AQCMP) required by AQ-SC2, and any deviation from the AQCMP mitigation measures shall require prior CPM notification and approval.

a) All diesel-fueled engines used in the construction**/demolition** of the facility shall have clearly visible tags issued by the on-site AQCMM showing that the engine meets the conditions set forth herein.

b) All construction**/demolition** diesel engines with a rating of 50 hp or higher shall meet, at a minimum, the Tier ~~3~~**4 or 4i** California Emission Standards for Off-Road Compression-Ignition Engines, as specified in California Code of Regulations, Title 13, section 2423(b) (1), unless a good faith effort to the satisfaction of the CPM that is certified by the on-site AQCMM demonstrates that such engine is not available for a particular item of equipment. In the event that a Tier ~~3~~3**4 or 4i** engine is not available for any off-road equipment larger than 50 hp, that equipment shall be equipped with a Tier ~~2~~**3** engine, or an engine that is equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides (NOx) and diesel particulate matter (DPM) to no more than Tier **3** levels unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is "not practical" for the following, as well as other, reasons.

1. There is no available retrofit control device that has been verified by either the California Air Resources Board or U.S. Environmental Protection Agency to control the engine in question to Tier ~~2~~**3** equivalent emission levels and the highest level of available control using retrofit or Tier ~~1~~**2** engines is being used for the engine in question; or

2. The construction**/demolition** equipment is intended to be on site for ten **working** days or less.

3. The CPM may grant relief from this requirement if the AQCMM can demonstrate a good faith effort to comply with this requirement and that compliance is not practical.

c) The use of a retrofit control device may be terminated immediately, provided that the CPM is informed within ten working days of the termination and that a replacement for the equipment item in question meeting the controls required in item "b" occurs within ten days of termination of the use, if the equipment would be needed to continue working at this site for more than 15 days after the use of the retrofit control device is terminated, if one of the following conditions exists:

1. The use of the retrofit control device is excessively reducing the normal availability of the construction**/demolition** equipment due to increased down time for maintenance, and/or reduced power output due to an excessive increase in back pressure.

2. The retrofit control device is causing or is reasonably expected to cause engine damage.

3. The retrofit control device is causing or is reasonably expected to cause a substantial risk to workers or the public.

4. Any other seriously detrimental cause which has the approval of the CPM prior to implementation of the termination.

d) All heavy earth-moving equipment and heavy duty construction**/demolition**-related trucks with engines meeting the requirements of (b) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications.

e) All diesel heavy construction**/demolition** equipment shall not idle for more than five minutes. Vehicles that need to idle as part of their normal operation (such as concrete trucks) are exempted from this requirement.

f) Construction**/demolition** equipment will employ electric motors when feasible.

Verification: The AQCMM shall include in **a table in** the Monthly Compliance Report the following to demonstrate control of diesel construction**/demolition**-related emissions:

A. A summary of all actions taken to control diesel construction**/demolition**-related emissions;

B. A list of all heavy equipment used on site during that month, including the owner of that equipment and a letter from each owner indicating that equipment has been properly maintained; and

C. Any other documentation deemed necessary by the CPM, and the AQCMM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.

AQ-SC6 The project owner shall submit to the CPM for review and approval any **project air permit** modification proposed by the project owner ~~to any project air permit~~. The project owner shall submit to the CPM any modification to any permit proposed by the District or U.S. EPA~~,~~ and any revised permit issued by the District or U.S. EPA~~,~~ for the project.

Verification: The project owner shall submit any proposed air permit modification to the CPM within five working days of its submittal either by**:** 1) the project owner to an agency, or 2) receipt of proposed modifications from an agency. The project owner shall submit all modified air permits to the CPM within 15 days of receipt.

AQ-SC7 The project owner shall not conduct any on-site remediation of contaminated soils at the project site, other than removal and transport.

Verification: The project owner shall provide transportation and disposition records of the contaminated soil removal and off-site remediation completion demonstrating compliance with this condition as part of the **applicable Monthly Compliance Report (**MCR**)** until the contaminated soil removal is complete.

AQ-SC8 The project owner shall submit to the CPM Quarterly Operation Reports, following the end of each calendar quarter that include operational and emissions information as necessary to demonstrate compliance with the ~~Conditions~~ **conditions** of ~~Certification~~ **certification** herein. The Quarterly Operation Report will specifically **state that the facility meets all applicable conditions of certification or** note or highlight **all** incidences of noncompliance.

Verification: The project owner shall submit the Quarterly Operation Reports to the CPM and District, if requested by the District, no later than 30 days following the end of each calendar quarter.

AQ-SC9 The gas turbines shall only be operated between the military time hours of 0600 to 2400, except in the event of a California Independent System Operator declared emergency.

Verification: The project owner shall submit the Quarterly Operation Reports to the CPM and District, if requested by the District, no later than 30 days following the end of each calendar quarter that demonstrate the operating hours and ~~that~~ provide documentation regarding declared emergency events when the gas turbines are operated between the hours of 2400 and 0600, military time.

~~**AQ-SC9** Only one combustion turbine shall undergo commissioning at a time.~~

~~**Verification:** The project owner shall provide the CPM CEMS data demonstrating compliance with this condition as part of the monthly commissioning status report (**AQ-80**).~~

AQ-SC10 ~~The project owner shall provide emission reduction mitigation to offset the project's PM (based on PM2.5) and VOC~~ **NOx** ~~emission increases at a ratio of 1:1.~~ **This** ~~These emission reductions~~ **mitigation requirement is** ~~are based on the following maximum annual emissions NOx emission~~ **increase** ~~for the facility (tons/yr).~~

~~Emission Reduction Credits/Pollutant~~	~~Tons/yr~~
~~PM10~~**NOx**	~~**21.56**7.6~~
~~VOC~~	~~8.4~~
~~Total Tons~~	~~16.0~~

~~Emission reductions can be provided using any one of the following methods in the following order of preference of their use:~~

~~1. Additional enforceable emission reductions created at the Encina Power Station site, such as the permanent shutdown of the Encina gas turbine peaker.~~

1~~2.~~ ~~The project owner can fund enforceable emission reductions through the Carl Moyer Fund in the amount of $~~**17,720**~~16,000/ton, or the applicable ARB Carl Moyer Program Guideline cost-effectiveness~~ **limit** ~~cap value,~~ **if different,** ~~at the time of funding the emission reductions, for the total ton quantity listed in the above table, minus any tons offset using the other two listed methods, with an additional 20 percent administration fee to fund the SDAPCD and/or other responsible local agencies with jurisdiction within 25 miles of the project site to be used to find and fund local emission reduction projects to the extent feasible. Emission reduction projects funded by this method will be weighted for evaluation and selection~~ **by the local administering agency,** ~~within the funding guideline value of $~~**17,720**~~16,000/ton of reduction, or revised~~ **ARB Carl Moyer Program Guideline cost-effectiveness limit value, if different at the time of funding** ~~current funding guideline limit value, based on the proximity of the emission reduction project and the relative health benefit to the local community surrounding the project site. Emission reduction project cost will not be a consideration for selection as long as the emission reduction project is within the approved~~ **2014** ~~2008, or later year as applicable, Carl Moyer funding guideline value.~~

2~~3.~~ ~~The project owner can fund other existing public agency regulated stationary or mobile source emission reduction programs or create a project specific fund to be administered through the SDAPCD or other local agency, which would provide enforceable surplus emission reductions. This funding shall include appropriate administrative fees as determined by the administering agency to obtain local emission reductions to the extent feasible. The project owner shall be responsible for demonstrating that the amount of such funding meets the emission reduction requirements of this condition. Emission reduction projects~~

~~funding by this method will be weighted for evaluation and selection~~ **~~by the local administering agency~~** ~~based on the proximity of the emission reduction project and the relative health benefit to the local community surrounding the project site.~~

~~4. 2.9 tons of PM10 ERCs currently owned by the project owner can be used to partially offset the PM emissions increase.~~

~~3~~~~5.ERC certificates from other emission reductions occurring in the San Diego Air Basin can be purchased and used to offset~~ **~~NOx emissions~~** ~~each pollutant on a 1:1 offset ratio basis~~ **~~for NOx ERCs and on a 2:1 offset ratio basis for VOC ERCs.~~** ~~only if local emission reduction projects are clearly demonstrated to be unavailable using methods 1 to 3 to meet the total emission reduction burden required by this condition. ERCs can be used on an interpollutant basis for SO_x for PM10 and NO_x for VOC, where the project owner will provide a letter from the SDAPCD that indicates the District's allowed interpollutant offset ratio, or PM10 for SO_x ERCs can be used on a 1:1 basis.~~

~~Carl Moyer or other emission reduction funding shall be provided to the responsible agencies prior to the initiation of on-site construction activities. The project owner shall work with the appropriate agencies to target emission reduction projects in the project area to the extent feasible. Emission reduction project selection information will be provided to the CPM for review and comment. Unused administrative fees shall be used for additional emission reduction program funding. ERC certificates, if used, will be surrendered prior to first turbine fire.~~

~~Verification:~~ ~~The project owner shall submit to the CPM confirmation that the appropriate quantity of Carl Moyer Project or other emission reduction program funding and/or ERCs have been provided prior to initiation of on-site construction activities for emission reduction program funding and at least 30 days prior to turbine first fire for ERCs.~~ **~~If ERCs are proposed to be used to offset all or part of the NOx emissions offset requirements of this condition the project owner shall provide the list of specific ERCs from the SDAPCD offset bank that are proposed to be used to the CPM prior to initiation of construction activities and shall update that list within 10 days of known changes to the proposed ERC list.~~** ~~The project owner shall provide emission reduction project selection information to the CPM for review and approval at least 15 days prior to committing funds to each selected emission reduction project. The project owner shall provide confirmation that the level of emission reduction program funding will meet the emission reduction requirements of this condition.~~ **~~[Deleted]~~**

AQ-SC11 The project owner shall develop and implement a Leak Detection and Repair (LDAR) plan for the onsite natural gas compressors.

Verification: **The project owner shall provide the LDAR plan to the CPM for review and approval at least 60 days prior to the start of installation of the natural gas compressors. The LDAR plan shall follow the general procedures outlined in the U.S. EPA's "Leak Detection and Repair – A Best Practices Guide" document. If requested the project owner shall provide records of the implementation of the LDAR plan.**

~~**AQ-SC11** Prior to the start of construction, the Project Owner shall provide proof of US EPA's approval of a Prevention of Significant Deterioration (PSD) Permit for CECP or certification that no such permit is required.~~

~~**Verification:** The project owner shall provide a report of its progress toward obtaining the PSD permit or the CPM CEMS data demonstrating compliance with this condition as part of monthly compliance reports.~~

AQ-SC12 The project owner shall not allow the overlap of specific construction and demolition phase activities. The following activities shall not be conducted concurrently with any of the other listed activities:

1. **ASTs 5, 6, and 7 demolition (licensed CECP activity)**
2. **ASTs 1, 2, and 4 demolition and berm removal (PTR described activities).**
3. **Amended CECP construction (PTA described activities).**
4. **EPS demolition (PTA and Encina Power Station Demolition Plan described activities).**

In addition, the gas turbines initial commissioning activity and the EPS demolition activity shall not be performed concurrently.

Verification: **The project owner shall identify the start and conclusion of the work phases described above in the Monthly Compliance R reports.**

AQ-SC13 The project owner shall not implode or fell any concrete or mortar structure, such as the main exhaust stack or the power plant building, during the demolition of the Encina Power Station.

Verification: **The project owner shall provide updates on the demolition progress and the demolition methods used in the Monthly Compliance Reports.**

District Final Determination of Compliance Conditions (SDAPCD 2015)

~~District Application Number 985745~~
~~Power block Unit #6 consisting of one nominal 208 MW (219 MW with steam augmentation) natural-gas fired combined-cycle Siemens SGT6-PAC5000F combustion turbine generator, serial number to be determined, with an ultra low NO_x (ULN) combustor, an evaporative inlet air cooler, a heat recovery steam generator with~~

~~a selective catalytic reduction unit, an oxidation catalyst, and a steam turbine generator and associated air-cooled heat exchanger to condense the exhaust steam from the steam turbine.~~

~~District Application Number 985747~~
~~Power block Unit #7 consisting of one nominal 208 MW (219 MW with steam augmentation) natural-gas fired combined-cycle Siemens SGT6-PAC5000F combustion turbine generator, serial number to be determined, with an ultra low NO_x (ULN) combustor, an evaporative inlet air cooler, a heat recovery steam generator with a selective catalytic reduction unit, an oxidation catalyst, and a steam turbine generator and associated air-cooled heat exchanger to condense the exhaust steam from the steam turbine.~~

FACILITYWIDE GENERAL CONDITIONS

AQ-1 The equipment authorized to be constructed under this permit is described in Application Nos. APCD2014-APP-003480, APCD2014-APP-003481, APCD2014-APP-003482, APCD2014-APP-003483, APCD2014-APP-003484, APCD2014-APP-003485, APCD2014-APP-003486, APCD2014-APP-003487.

Verification: The project owner shall provide copies of any applications to alter the equipment or the permit conditions for the equipment covered by the permit applications numbered above to the CPM within five days of sending such applications to the District. The project owner shall make the site available for inspection of equipment and records by representatives of the District, ARB, and the Energy Commission.

AQ-2 The project owner shall cancel all applications for permits and/or retire all permits to operate for all of the equipment authorized to be constructed under this permit on or before the date construction commences for any equipment authorized for construction under Application Numbers APCD2007-APP-985745, APCD2007-APP-985747, or APCD2007-APP-985748 (the 2012 Licensed CECP).

Verification: This condition requires canceling the amended CECP permit applications if the project owner decides to build the previously licensed CECP. The project owner shall provide to the CPM documentation of the cancellation of the 2014 permit applications, if the project approved under the 2007 permit applications is built, by the time any construction activity approved under the 2007 permit applications commences.

AQ-3 The project owner shall cancel permit Application Nos. APCD2007-APP-985745, APCD2007-APP-985747, and APCD2007-APP-985748 (the 2012 Licensed CECP) on or before the date construction commences for any equipment authorized for construction under this permit.

Verification: This condition requires canceling the previously licensed CECP permit application if the project owner decides to build the amended CECP. The

project owner shall provide to the CPM documentation of the cancellation of the 2007 permit applications, if the project approved under the 2014 permit applications is built, by the time any construction activity approved under the 2014 permit applications commences.

AQ-4 **Prior to the earliest initial startup date for any of the combustion turbines, the applicant shall surrender to the District Class A Emission Reduction Credits (ERCs) in an amount equivalent to 47.94 tons per year of oxides of nitrogen (NOx) to offset the net maximum allowable increase of 39.9 tons per year of NOx emissions for the equipment described in District Application Nos. APCD2014-APP-003480, APCD2014-APP-003481, APCD2014-APP-003482, APCD2014-APP-003483, APCD2014-APP-003484, APCD2014-APP-003485, APCD2014-APP-003486, APCD2014-APP-003487. [Rule 20.3(d)(8)]**

Verification: **The project owner shall submit to the CPM, within 15 days of ERC surrender to the District, information demonstrating compliance with this condition.**

AQ-1~~4~~5 This equipment shall be properly maintained and kept in good operating condition at all times and, to the extent practicable, the project owner shall maintain and operate the equipment and any associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions. [Rule 21 and 40 CFR §60.11]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-2~~5~~6 The project owner shall operate the project in accordance with all data and specifications submitted with the application under which this license is issued and District Application Nos. **2014-APP-003480, 2014-APP-003481, 2014-APP-003482, 2014-APP-003483, 2014-APP-003484, 2014-APP-003485, 2014-APP-003486, and 2014-APP-003487**. [Rule 14]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

~~**AQ-5** Prior to the earlier of the initial startup dates for either of the two combustion turbines, the project owner shall surrender to the District Class A Emission Reduction Credits (ERCs) in an amount equivalent to 47.9 tons per year of oxides of nitrogen (NO_X) to offset the net maximum allowable increase of 39.9 tons per year of NO_X emissions for the two combustion turbines and the emergency fire pump engine described in District Application Nos. 985745, 985747, and 985748. [Rule 20.3(d) (8)]~~

~~**Verification:** The project owner shall submit to the CPM, within 15 days of ERC surrender to the District, information demonstrating compliance with this condition.~~

AQ-~~36~~7 The project owner shall provide access, facilities, utilities, and any necessary safety equipment, with the exception of personal protective equipment requiring individual fitting and specialized training, for source testing and inspection upon request of the Air Pollution Control District. [Rule 19]

Verification: The project owner shall provide facilities, utilities, and safety equipment for source testing and inspections upon request of the District, ARB, and the Energy Commission.

AQ-4~~7~~8 The project owner shall obtain any necessary District permits for all ancillary combustion equipment including emergency engines, prior to on-site delivery of the equipment. [Rule 10]

Verification: The project owner shall submit any proposed air permit modification to the CPM within five working days of its submittal either by 1) the project owner to an agency, or 2) receipt of proposed modifications from an agency. The project owner shall submit all modified air permits to the CPM within 15 days of receipt.

AQ-6~~8~~9 A rolling 12-calendar-month period is one of a series of successive consecutive 12-calendar-month periods. The initial 12-month-calendar period of such a series shall begin on the first day of the month in which the applicable beginning date for that series occurs as specified in this permit. [Rule 20.3 (d) (3), Rule 20.3(d) (8) and Rule 21]

Verification: ~~The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.~~ **None required.**

AQ-~~7~~910 Pursuant to 40 CFR §72.30(b)(2)(ii) of the Federal Acid Rain Program, the project owner shall submit an application for a Title IV Operating Permit at least 24 months prior to the initial startup of the combustion turbines. [40 CFR Part 72]

Verification: The project owner shall submit to the CPM copies of the acid rain permit application within five working days of its submittal by the project owner to the District.

AQ-~~8~~1011 The project owner shall comply with all applicable provisions of 40 CFR Part 73, including requirements to offset, hold and retire sulfur dioxide (SO_2) allowances. [40 CFR Part 73]

Verification: The project owner shall submit to the CPM and the District the **combustion turbine generator (**CTG**)** annual **SO_2 emission total**~~operating data~~ and SO_2 allowance information demonstrating compliance with all applicable provisions of 40 CFR 73 as part of the Quarterly Operation Reports (**AQ-SC8**).

AQ-~~9~~1112 All records required by this permit shall be maintained on site for a minimum of five years and made available to the District upon request. [Rule 1421]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~12~~13 The fire pump and emergency diesel engines shall not be operated for maintenance and testing purposes at the same time that any combustion turbine is operating during a commissioning period. [Rule 20.3(d) (2)]

Verification: The project owner shall maintain records of the fire-pump and emergency diesel engine operation during the combustion turbine initial commissioning period that shows compliance with this condition and shall provide that data with the Monthly Compliance Reports required during any commissioning period.

COMBUSTION TURBINE CONDITIONS

District Application Number 2014-APP-003482
Unit #6: One nominal 104 MW natural-gas-fired simple-cycle General Electric LMS 100 PA combustion turbine generator with demineralized water injection, S/N TBD; maximum heat input of 984 MMBtu/hr (HHV) at average site-specific ambient conditions; an inlet-air evaporative cooler; combustion turbine exhaust ducted to an oxidation catalyst and selective catalytic reduction (SCR) system with aqueous ammonia injection.

District Application Number 2014-APP-003483

Unit #7: One nominal 104 MW natural–gas-fired simple-cycle General Electric LMS 100 PA combustion turbine generator with demineralized water injection, S/N TBD; maximum heat input of 984 MMBtu/hr (HHV) at average site-specific ambient conditions; an inlet-air evaporative cooler; combustion turbine exhaust ducted to an oxidation catalyst and selective catalytic reduction (SCR) system with aqueous ammonia injection.

District Application Number 2014-APP-003484

Unit #8: One nominal 104 MW natural-gas-fired simple-cycle General Electric LMS 100 PA combustion turbine generator with demineralized water injection, S/N TBD; maximum heat input of 984 MMBtu/hr (HHV) at average site-specific ambient conditions; an inlet-air evaporative cooler; combustion turbine exhaust ducted to an oxidation catalyst and selective catalytic reduction (SCR) system with aqueous ammonia injection.

District Application Number 2014-APP-003485

Unit #9: One nominal 104 MW natural-gas-fired simple-cycle General Electric LMS 100 PA combustion turbine generator with demineralized water injection, S/N TBD; maximum heat input of 984 MMBtu/hr (HHV) at average site-specific ambient conditions; an inlet-air evaporative cooler; combustion turbine exhaust ducted to

an oxidation catalyst and selective catalytic reduction (SCR) system with aqueous ammonia injection.

District Application Number 2014-APP-003486
Unit #10: One nominal 104 MW natural-gas-fired simple-cycle General Electric LMS 100 PA combustion turbine generator with demineralized water injection, S/N TBD; maximum heat input of 984 MMBtu/hr (HHV) at average site-specific ambient conditions; an inlet-air evaporative cooler; combustion turbine exhaust ducted to an oxidation catalyst and selective catalytic reduction (SCR) system with aqueous ammonia injection.

District Application Number 2014-APP-003487
Unit #11: One nominal 104 MW natural-gas-fired simple-cycle General Electric LMS 100 PA combustion turbine generator with demineralized water injection, S/N TBD; maximum heat input of 984 MMBtu/hr (HHV) at average site-specific ambient conditions; an inlet-air evaporative cooler; combustion turbine exhaust ducted to an oxidation catalyst and selective catalytic reduction (SCR) system with aqueous ammonia injection.

DEFINITIONS

AQ-10~~13~~14 For purposes of determining compliance with the emission limits of this permit, a shutdown period is the **13 minute period preceding the moment at which fuel flow ceases.** ~~period of time that begins with the lowering of the gross electrical output (load) of the combustion turbine below 114 megawatts (MW) and that ends five minutes after fuel flow to the combustion turbine ceases, not to exceed 35 consecutive minutes.~~ [Rule 20.3 (d) (1)]

Verification: The project owner shall submit to the CPM the CTG shutdown event duration data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC8**).

AQ-11~~14~~15 **Unless otherwise noted in a specific condition,** ~~A~~ **a** startup period is the period of time that begins when fuel flows to the combustion turbine following a non-operational period. For purposes of determining compliance with the emission limits of this permit, the duration of a startup period shall not exceed **25**~~60~~ consecutive minutes. [Rule 20.3(d) (1)]

Verification: The project owner shall submit to the CPM the CTG startup event duration data demonstrating compliance with this condition as part of the Quarterly Operation Reports (**AQ-SC8**).

AQ-12~~15~~16 A non-operational period is any five-consecutive-minute period when fuel does not flow to the combustion turbine. [Rule 20.3(d) (1)]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

~~**AQ-13** Tuning is defined as adjustments to the combustion or emission control system that involves operating the combustion turbine or emission control system in a manner such that the emissions control equipment may not be fully effective or operational. Only one gas turbine shall be tuned at any given time. Tuning events shall not exceed 720 unit operating minutes in a calendar day nor exceed 40 hours in a calendar year for each turbine. The District compliance division shall be notified at least 24 hours in advance of any tuning event. For purposes of this condition, the number of hours of tuning in a calendar year is defined as the total unit operating minutes of tuning during the calendar year divided by 60. [Rule 20.3(d) (1)]~~

~~**Verification:** The project owner shall notify the District and CPM at least 24 hours in advance of any tuning event. The project owner shall submit to the CPM the CTG operating data demonstrating compliance with tuning limitations identified in this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.~~

AQ-14~~16~~17 A Continuous Emission Monitoring System (CEMS) protocol is a document approved in writing by the District that describes the methodology and quality assurance and quality control procedures for monitoring, calculating, and recording stack emissions from the combustion turbine that is monitored by the CEMS. [Rules 69.3, 69.3.1, and 20.3(d) (1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall maintain a copy of the CEMS protocol on site and provide it for inspection on request by representatives of the District, ARB, and the Energy Commission.

~~**AQ-15** A transient hour is a clock hour during which the change in gross electrical output produced by the combustion turbine exceeds 50 MW per minute for one minute or longer during any period that is not part of a startup or shutdown period. [Rule 20.3(d) (1)]~~

~~**Verification:** The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.~~

AQ-16~~17~~18 For each combustion turbine, the commissioning period is the period of time commencing with the initial startup of that turbine and ending ~~the sooner of 120 calendar days from the initial startup,~~ after **213**~~415~~ hours of turbine operation, or the date the project owner notifies the District the commissioning period has ended**, whichever comes first**. For purposes of this condition, the number of hours of turbine operation is defined as the total unit operating minutes during the commissioning period divided by 60 **rounded to the nearest hundredth of an hour**. [Rule 20.3(d) (1)]

Verification: The project owner shall **provide commissioning event data that shows compliance with the commissioning period operation limits for each combustion turbine in the Monthly Compliance Reports and shall** make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

~~**AQ-17** For each combustion turbine, the shakedown period is the period of time commencing with the initial startup that turbine and ending the sooner of 180 calendar days from the initial startup or the date the project owner notifies the District that the shakedown period has ended. [Rules 20.1(c) (16) and 21]~~

~~**Verification:** The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.~~

~~**AQ-18** Turbine A is the combustion turbine as described on Applications No. 985745 or No. 985747, as applicable, that first completes its shakedown period. If both turbines complete their shakedown period on the same date, then Turbine A is the turbine described on Application No. 985745. [Rules 20.1(c) (16) and 21]~~

~~**Verification:** The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.~~

AQ-~~21~~18~~19~~ For each combustion turbine, a unit operating day, hour, and minute mean the following:

a) A unit operating day means any calendar day in which the turbine combusts fuel.

b) A unit operating hour means any clock hour in which the turbine combusts fuel.

c) A unit operating minute means any clock minute in which the turbine combusts fuel and any clock minute that is part of a shutdown period.

[Rule 21, 40 CFR Part 75, Rule 20.3(d) (1), 40 CFR Part 60 Subpart KKKK]

Verification: ~~The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission~~**. None required.**

~~**AQ-19** Turbine B is the combustion turbine as described on Applications No. 985745 or No. 985747, as applicable, that last completes its shakedown period. If both turbines complete their shakedown period on the same date, then Turbine B is the turbine described on Application No. 985747. [Rules 20.1(c) (16) and 21]~~

~~**Verification:** The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.~~

~~**AQ-20** Low load operation is a period of time that begins when the gross electrical output (load) of the combustion turbine is reduced below 114 MW and that ends 10 consecutive minutes after the combustion turbine load exceeds 114 MW, provided that fuel is continuously combusted during the entire period and one or more clock hour concentration emission limits specified in this permit are exceeded as a result of the low-load operation. For each~~

~~combustion turbine, periods of operation at low load shall not exceed 130 unit operating minutes in any calendar day nor an aggregate of 780 unit operating minutes in any calendar year. No low load operation period shall begin during a startup period. [Rule 20.3(d) (1)]~~

~~Verification:~~ ~~The project owner shall submit to the CPM the gas turbine operating data demonstrating compliance with this condition on request and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.~~

GENERAL CONDITIONS

AQ-~~22~~19~~20~~20 The exhaust stack~~s~~ for each combustion turbine shall be at least **90**~~139~~ feet in height above site base elevation**, and with an interior exhaust stack diameter of no more than 13.5 feet at the point of release unless it is demonstrated to the District that all requirements of District rules 20.3 and 1200 are satisfied with a different stack configuration**. [Rules 20.3(d) (2) and 1200]

Verification: The project owner shall submit to the CPM for review the exhaust stack specification at least 60 days before ~~the installation~~ **initial construction** of the stack.

AQ-~~23~~20~~20~~21 The combustion turbines shall be fired on Public Utility Commission (PUC) quality natural gas. The project owner shall maintain, on site, quarterly records of the natural gas sulfur content (grains of sulfur compounds per 100 dscf of natural gas) and hourly records of the higher and lower heating values (btu/scf) of the natural gas; and provide records to District personnel upon request. [Rule 20.3(d) (1)] **Natural gas sulfur content records must be kept with a minimum reporting limit of 0.25 grains sulfur compounds per 100 dscf of natural gas.** [Rule 20.3(d) (1)]

Verification: The project owner shall submit the quarterly fuel sulfur content values in the in the Quarterly Operation Reports **(AQ-SC8)** and make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~24~~21~~22~~22 Unless otherwise specified in this permit, all continuous monitoring data shall be collected at least once every minute. [Rules 69.3, 69.3.1, and 20.3(d) (1)]

Verification: ~~The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission~~. **None required.**

EMISSION LIMITS

AQ-~~25~~22~~21~~23 For purposes of determining compliance with emission limits based on source testing, the average of three subtests shall be used. For purposes of

determining compliance with emission limits based on a Continuous Emission Monitoring System (CEMS), data collected in accordance with the CEMS protocol shall be used and the averages for averaging periods specified herein shall be calculated as specified in the CEMS protocol. [Rules 69.3, 69.3.1, and 20.3(d) (1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: Source tests demonstrating compliance with this condition shall be provided to the CPM and are due within the timeframes specified in Conditions **AQ-~~53~~56** and **AQ-~~54~~57**. CEMS data summaries shall be submitted to the CPM as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~26~~~~23~~24 For purposes of determining compliance with emission limits based on CEMS data, all CEMS calculations, averages, and aggregates shall be performed in accordance with the CEMS protocol approved in writing by the District. [Rules 69.3, 69.3.1, and 20.3(d) (1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: CEMS data summaries shall be submitted to the CPM as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~27~~~~24~~25 For each emission limit expressed as pounds, pounds per hour, or parts per million based on a one-hour or less averaging period or compliance period, compliance shall be based on using data collected at least once every minute when compliance is based on CEMS data **except as specified in the District approved CEMS Protocol**. [Rules 69.3, 69.3.1, and 20.3(d) (1)]

Verification: CEMS data summaries shall be submitted to the CPM as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~28~~~~25~~26 When a combustion turbine is combusting fuel (operating), the emission concentration of oxides of nitrogen (NO_X), calculated as nitrogen dioxide (NO_2), shall not exceed **2.5**~~2.0~~ parts per million by volume on a dry basis (ppmvd) corrected to 15~~%~~ **percent** oxygen **averaged over a one-clock-hour period**, except during commissioning, ~~low load operation,~~ startup, **and** shutdown~~, or tuning~~ periods for that turbine. ~~For purposes of determining compliance based on CEMS data, the following averaging periods calculated in accordance with the CEMS protocol shall apply:~~

~~a. For any transient hour, a 3-clock hour average, calculated as the average of the transient hour, the clock hour immediately prior to the transient hour and the clock hour immediately following the transient hour.~~

~~b. For all other hours, a 1-clock hour average.~~

[Rule 20.3(d) (1)]

Verification: The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~29~~~~26~~27 When a combustion turbine is operating, the emission concentration of carbon monoxide (CO) shall not exceed **4.0**~~2.0~~ ppmvd corrected to 15 percent oxygen, **averaged over a one-clock-hour period,** except during commissioning, ~~low load operation,~~ startup, **and** shutdown~~, or tuning~~ periods for that turbine. ~~For purposes of determining compliance based on CEMS data, the following averaging periods calculated in accordance with the CEMS protocol shall apply:~~

~~a. For any transient hour, a 3-clock-hour average, calculated as the average of the transient hour, the clock hour immediately prior to the transient hour and the clock hour immediately following the transient hour.~~

~~b. For all other hours, a 1-clock-hour average.~~

[Rule 20.3(d) (2~~1~~)]

Verification: The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~30~~27~~28~~28 When a combustion turbine is operating, the volatile organic compound (VOC) concentration, calculated as methane, measured in the exhaust stack, shall not exceed 1.5 ppmvd corrected to 15 percent oxygen **and averaged over a one-clock-hour period**, except during commissioning, ~~low load operation,~~ startup, **and** shutdown~~, or tuning~~ periods for that turbine. For purposes of determining compliance based on the CEMS, the District approved CO/VOC surrogate relationship~~,~~ **and** the CO CEMS data, **averaged over a one-clock-hour period,** ~~and the following averaging periods calculated in accordance with the CEMS protocol~~ shall be used:

~~a. For any transient hour, a 3-clock-hour average, calculated as the average of the transient hour, the clock hour immediately prior to the transient hour and the clock hour immediately following the transient hour.~~

~~b. For all other hours, a 1-clock-hour average.~~

The CO/VOC surrogate relationship shall be verified and/or modified, if necessary, based on source testing. [Rule 20.3(d) (1)]

Verification: The project owner shall provide the CEMS data, using the appropriate CO/VOC surrogate relationship, to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~31~~~~28~~29 When a combustion turbine is operating, the ammonia concentration (ammonia slip), shall not exceed 5.0 ppmvd corrected to 15 percent oxygen **and averaged over a one-clock-hour period**, except during commissioning, ~~low load operation,~~ startup, **and** shutdown~~, or tuning~~ periods for that turbine. [Rule 1200]

Verification: The project owner shall provide the estimated ammonia concentrations and ammonia emissions based on the annual source test data, the CEMS data and

SCR ammonia flow data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~34~~29~~30~~30 When a combustion turbine is operating, the emission concentration of ~~oxides of nitrogen (~~NO_X~~)~~, calculated as nitrogen dioxide (NO_2) shall not exceed 42 ppmvd calculated over each clock-hour period and corrected to 15 percent oxygen~~, on a dry basis,~~ except **for**~~during~~ periods of startup and shutdown, as defined in Rule 69.3. ~~This limit does not apply during any period in which the facility is subject to a variance from the emission limits contained in Rule 69.3.~~ [Rule 69.3]

Verification: The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~32~~30~~31~~31 When a combustion turbine is operating with post-combustion air pollution control equipment that controls oxides of nitrogen (NO_X) emissions, the emission concentration **of** NO_X, calculated as nitrogen dioxide (NO_2), shall not exceed **13.6**~~12.9~~ ppmvd calculated over each clock-hour period and corrected to 15 percent oxygen, except for periods of startup and shutdown, as defined in Rule 69.3.1. This limit does not apply during any period in which the facility is subject to a variance from the emission limits contained in Rule 69.3.1. [Rule 69.3.1]

Verification: The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~33~~31~~32~~32 When a combustion turbine is operating without any post-combustion air pollution control equipment that controls oxides of nitrogen (NO_X) emissions, the emission concentration of NO_X calculated as nitrogen dioxide (NO_2) from each turbine shall not exceed **22.6**~~21.6~~ parts per million by volume on a dry basis (ppmvd) calculated over each clock-hour period and corrected to 15 percent oxygen, except for periods of startup and shutdown, as defined in Rule 69.3.1. This limit does not apply during any period in which the facility is subject to a variance from the emission limits contained in Rule 69.3.1. [Rule 69.3.1]

Verification: The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~35~~32~~33~~33 For each rolling four unit operating hour period, average emission concentration of oxides of nitrogen (NOx) for each turbine calculated as nitrogen dioxide (NO_2) in parts per million by volume dry (ppmvd) corrected to 15 percent oxygen or, alternatively, as elected by the project owner, the average NOx emission rate in pounds per megawatt-hour (lb/MWh) shall not exceed an average emission limit calculated in accordance with 40 CFR Section 60.4380(b)(3). The emission concentration and emission rate averages shall be calculated in accordance with 40 CFR Section 60.4380(b) (1). The average emission concentration limit and emission rate limit shall be based on an average

of hourly emission limits over the four unit operating hour period including the operating-hour and three unit operating-hours immediately preceding. For any unit operating hour where multiple emission standards would apply based on load of the turbine, the applicable standard shall be the higher of the two limits. The hourly emission concentration limit and emission rate limit shall be as follows based on the load of the turbine over the four unit operating hour period:

Case	Emission Limit, ppm	Emission Limit,lb/MWh
i. All four hours at or above 75% Load	15	0.43
ii. All four hours below 75% Load	96	4.7
iii. Combination of hours	(a x 15+b x 96)/4	(a x 0.43+b x 4.7)/4

Where: a = ~~no.~~ the number of unit operating hours in four hour ~~hr period~~ with all operation above 75% load and b = 4-a.

The averages shall exclude all clock hours occurring before the Initial Emission Source Test but shall include emissions during all other times that the equipment is operating including, but not limited to, emissions during startup and shutdown periods. For each six-calendar-month period, emissions in excess of these limits and monitor downtime shall be identified in accordance with 40 CFR Sections 60.4350 and 60.4380(b)(2), except that Section 60.4350(c) shall not apply for identifying periods in excess of a NOx concentration limit. For the purposes of this condition, unit operating hours shall have the meaning as defined in 40 CFR 60.4420. [40 CFR Part 60 Subpart KKKK]

~~For each rolling 30-day-unit-operating-day period, average emission concentration of oxides of nitrogen (NO_X) for each turbine calculated as nitrogen dioxide (NO_2) in parts per million by volume dry (ppmvd) corrected to 15 percent oxygen or, alternatively, as elected by the project owner, the average NO_X emission rate in pounds per megawatt-hour (lb/MWh) shall not exceed an average emission limit calculated in accordance with 40 CFR Section 60.4380(b)(3). The emission concentration and emission rate averages shall be calculated in accordance with 40 CFR Section 60.4380(b)(1). The average emission concentration limit and emission rate limit shall be based on an average of hourly emission limits over the 30-day-unit-operating-day period. The hourly emission concentration limit and emission rate limit shall be15 ppmvd corrected to 15 percent oxygen and 0.43 lb/MWh, respectively, for clock hours when the combustion turbine load is equal to or greater than 156 megawatts at all times during the clock hour, respectively, and 96 ppmvd corrected to 15 percent oxygen and 4.7 lb/MWh for all other clock hours when the combustion turbine is operating, respectively. The averages shall exclude all clock hours occurring before the Initial Emission Source Test but shall include emissions during all other times that the equipment is operating including, but not limited to, emissions during~~

~~low load operation, startup, shutdown, and tuning periods. For each six-calendar-month period, emissions in excess of these limits and monitor downtime shall be identified in accordance with 40 CFR Sections 60.4350 and 60.4380(b)(2), except that Section 60.4350(c) shall not apply for identifying periods in excess of a NO_X concentration limit, and reported to the District and the federal EPA in accordance with Title V Operating Permit No. 974488. [40 CFR Part 60 Subpart KKKK]~~

Verification: The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~36~~33~~3~~34 The emissions of particulate matter less than or equal to ten microns in diameter (PM10) shall not exceed **5.0**~~9.5~~ pounds per hour for each combustion turbine. [Rule 20.3(d)**(1),**(2)]

Verification: Source tests demonstrating compliance with this condition shall be provided to the CPM and are due within the timeframes specified in Conditions **AQ-~~53~~56** and **AQ-~~54~~57**.

AQ-~~34~~35 The emissions of particulate matter less than or equal to ten microns in diameter (PM10) shall not exceed 3.5 pounds per hour per turbine, averaged over all six combustion turbines, calculated as the arithmetic average of the most recent source test for each turbine. [Rule 20.3(d)(1),(2)]

Verification: Source tests demonstrating compliance with this condition shall be provided to the CPM and are due within the timeframes specified in Conditions **AQ-~~53~~56** and **AQ-~~54~~57**.

AQ-~~37~~35~~3~~36 The discharge of particulate matter from the exhaust stack of each combustion turbine shall not exceed 0.10 grains per dry standard cubic foot (0.23 grams/dscm). The District may require periodic testing to verify compliance with this standard. [Rule 53]

Verification: Source tests demonstrating compliance with this condition shall be provided to the CPM and are due within the timeframes specified in Conditions **AQ-~~53~~56** and **AQ-~~54~~57**.

AQ-~~38~~36~~3~~37 Visible emissions from the lube oil vents and the exhaust stack of each combustion turbine shall not exceed 20 percent opacity for more than three minutes in any period of 60 consecutive minutes. [Rule 50]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~39~~37~~3~~38 Mass emissions from each combustion turbine of oxides of nitrogen (NO_X), calculated as NO_2; carbon monoxide (CO); and volatile organic compounds (VOC), calculated as methane, shall not exceed the following limits, except during commissioning, ~~low load operation,~~ startup, **and**

shutdown **operations**~~, or tuning periods for that turbine~~. A one-clock-hour averaging period for these limits shall apply to CEMS data**.** ~~except for emissions during transient hours when a 3-clock-hour averaging period shall apply.~~ [Rule 20.3(d)(2)]

Pollutant	***Emission Limit, lb***
a) NO_X	***9.1***~~*15.1*~~
b) CO	***8.8***~~*9.2*~~
c) VOC	***2.5***~~*4.0*~~

Verification: The project owner shall submit to the CPM operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-40~~**38**~~**39** Excluding any minutes that are coincident with a shutdown period, cumulative mass emissions of oxides of nitrogen (NO_x), calculated as NO_2; carbon monoxide (CO); and volatile organic compounds (VOC), calculated as methane, during a combustion turbine's startup period shall not exceed the following limits during any startup period, except during that turbine's commissioning period. [**NOx and VOC:** Rule 20.3(d)(1)**; CO: Rule 20.3(d)(2)]**

Pollutant	***Emission Limit, lb***
a) NO_X	***14.7***~~*69.2*~~
b) CO	***7.4***~~*5*~~*45*
c) VOC	***2.0***~~*1*~~*5.5*

Verification: The project owner shall submit to the CPM operating data demonstrating compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-41~~**39**~~**40** Cumulative mass emissions of oxides of nitrogen (NO_X), calculated as NO_2; carbon monoxide (CO); and volatile organic compounds (VOC), calculated as methane, during a combustion turbine's shutdown period shall not exceed the following limits during any shutdown period, except during that turbine's commissioning period. [Rule 20.3(d)(1)]

Pollutant	***Emission Limit, lb***
a) NO	***0.6***~~*25.7*~~
b) CO	***3.4***~~*277*~~
c) VOC	***2.4***~~*6.2*~~

Verification: The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-42~~**40**~~**41** **Emissions of**~~**The**~~ oxides of nitrogen (NO_X), calculated as NO_2, ~~emissions~~ from each combustion turbine shall not exceed **90**~~200~~ pounds per hour ~~and~~

~~total aggregate NO_x emissions from both combustion turbines combined shall not exceed 286 pounds per hour, calculated as nitrogen dioxide and measured over each 1-clock hour period.~~**calculated as nitrogen dioxide and measured over each one-clock-hour period. In addition, the emission concentration of NOx calculated as nitrogen dioxide (NO_2) from each turbine shall not exceed 100 parts per million by volume on a dry basis (ppmvd) calculated over each clock-hour period and corrected to 15 percent oxygen.** These emission limits shall apply during all times ~~one or both~~**a** turbine~~s are~~ **is** operating, including, but not limited to, emissions during commissioning, ~~low load operation,~~ startup, **and** shutdown~~, and tuning~~ periods. [Rule 20.3(d)(2)]

Verification: The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-43~~41~~42 The carbon monoxide (CO) emissions from each combustion turbine shall not exceed **248**~~3813~~ pounds per hour ~~and total aggregate CO emissions from both combustion turbines combined shall not exceed 4627 pounds per hour measured over each 1-clock hour period.~~**measured over each 1-clock-hour period. In addition, the emission concentration of CO from each turbine shall not exceed 400 parts per million by volume on a dry basis (ppmvd) calculated over each clock-hour period and corrected to 15 percent oxygen.** This emission limit shall apply during all times that ~~one or both~~ **a** turbine~~s are~~ **is** operating, including, but not limited to**,** emissions during commissioning, ~~low load operation,~~ startup, **and** shutdown~~, and tuning~~ periods. [Rule 20.3(d)(2)(i)]

Verification: The project owner shall provide CEMS emissions data to demonstrate compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**.

AQ-4~~2~~43 ~~Beginning with the earlier of the initial startup dates for either combustion turbine, aggregate emissions of oxides of nitrogen (NO_X), calculated as nitrogen dioxide (NO_2); carbon monoxide (CO); volatile organic compounds (VOCs), calculated as methane; particulate matter less than or equal to 10 microns in diameter (PM10); and oxides of sulfur (SO_x), calculated as sulfur dioxide (SO_2), from the combustion turbines described in District Applications No. 985745 and 985747 and the emergency fire pump described in Application No. 985748, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1), shall not exceed the following limits for each rolling 12-calendar-month period:~~

Total emissions from the equipment authorized to be constructed under this permit, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1) as it exists on the date the permit to operate for this equipment is approved and except for CO emissions during any rolling 12-calendar month period in which a turbine commissioning period occurs, shall not exceed the following limits for each rolling 12-calendar-month period,

beginning with the 12-calendar-month period beginning with the month in which the earliest initial startup among the equipment authorized to be constructed under this permit occurs:

Pollutant	***Emission Limit, tons per year***
a) NO_X	***84.18***~~*72.11*~~
b) CO	***77.8***~~*339.9*~~
c) VOC	***24.1***~~*23.7*~~
d) PM10	***28.4***~~*39.0*~~
e) SO_X (calculated as SO_2)	*5.6*

~~**In addition, beginning with the date on which both turbines have completed their commissioning periods aggregate emissions of CO and VOC from the equipment specified above in this condition shall not exceed 217.3 and 20.1 tons per year, respectively, for each rolling 12-calendar-month period.**~~

The aggregate emissions of each pollutant shall include emissions during all times that the equipment is operating**, except for CO emissions during any rolling 12-calendar month period in which a turbine commissioning period occurs. All calculations performed to show compliance with this limit shall be performed according to a protocol approved in advance by the District.** ~~including, but not limited to, emissions during commissioning, low load operation, startup, shutdown, and tuning periods.~~ [Rules 20.3(d) ~~(3)~~ **(2), 20.3(d) (5)**, 20.3(d) (8) and 21]

Verification: The project owner shall submit to the CPM and the District the facility annual operating and emissions data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports **(AQ-SC8)**.

AQ-44 Total emissions of CO during any rolling 12-calendar month period in which a turbine commissioning period occurs from the equipment authorized to be constructed under this permit except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d)(1) as it exists on the date the permit to operate for this equipment is approved shall not exceed the following limit for each rolling 12-calendar-month period, beginning with the 12-calendar-month period that begins with the month in which the earliest initial startup among the equipment authorized to be constructed under this permit occurs:

77.8 tons per year + N x 4.05 tons/yr

Where N = number of turbines with commissioning periods occurring within the 12-calendar month period. All calculations performed to show compliance with this limit shall be performed according to a protocol approved in advance by the District. [Rules 20.3(d) (2), 20.3(d) (5), 20.3(d) (8), and 21]

Verification: The project owner shall provide emissions summary data in compliance with this condition as part of the Quarterly Operation Reports (AQ-SC8). The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~43~~45 Total emissions from each combustion turbine shall not exceed 14.3 tons per year of NOx calculated as nitrogen dioxide and shall not exceed 4.73 tons per year of PM10. For the purposes of this condition emissions shall be calculated on a rolling 12-calendar month basis beginning with the calendar month in which the initial start of the turbines occurs. All calculations performed to show compliance with this limit shall be performed according to a protocol approved in advance by the District.

Verification: The project owner shall provide emissions summary data in compliance with this condition as part of the Quarterly Operation Reports (AQ-SC8). The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~44~~46 Total emissions from the equipment permitted under APCD2003-PTO-001267, APCD2003-PTO-000791, APCD2003-PTO-000792, APCD2003-PTO-000793, APCD2003-PTO-001770 and APCD2003-PTO-005238 shall not exceed any of the following mass emissions limits ~~in quantities and~~ according to the schedule based on the number of turbines that have undergone their initial startup as described in the following table:

Number of Turbines Started	NOx (ton/yr)	PM_{10} (ton/yr)
1~~One gas turbine~~	No Limit	No Limit
2~~Total of two gas turbines~~	No Limit~~56.4~~	No Limit
3~~Total of three gas turbines~~	~~42.2~~ 41.57	No Limit
4~~Total of four gas turbines~~	~~28.1~~ 27.42	~~38.5~~ 27.6
5~~Total of five gas turbines~~	~~13.9~~ 13.27	~~33.8~~ 22.9
6~~Total of six gas turbines~~	0.0	~~29.1~~ 18.2

For the purposes of this condition, emissions shall be calculated on a rolling 12-calendar-month basis beginning with the calendar month in which 180 days has passed since the latest initial start from among the indicated number of turbines. Once a turbine has undergone the initial startup, it is included in determining the number of turbines started from the initial start date going forward. All calculations performed to show compliance with this limit shall be performed according to a protocol approved in advance by the District.

Verification: This condition requires the existing Encina boilers and turbine to cease operations once the amended CECP is operational. The project owner shall

provide emissions summary data in compliance with this condition as part of the Quarterly Operation Reports (AQ-SC8). The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~45~~47 For each calendar month **and each rolling 12-calendar-month period,**, the project owner shall maintain records, as applicable, on a calendar monthly basis, of mass emissions during each calendar month **and rolling 12-calendar-month period** of NO_X ~~(~~calculated as NO_2~~)~~, CO, VOCs ~~(~~calculated as methane~~)~~, PM10, and SO_X ~~(~~calculated as SO_2~~)~~, in tons, from each emission unit **located at this stationary source** ~~described in District Applications No. 985745, 985747, and 985748~~ , except for emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1) **as it exists on the date the permit to operate for this equipment is approved**. These records shall be made available for inspection within 15 calendar days after the end of each calendar month. [Rules 20.3(d) (3), 20.3(d) (8) and 21]

Verification: The project owner shall provide emissions summary data in compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~46~~48 For each combustion turbine, the number of annual operating hours in each calendar year shall not exceed 2,700. For the purposes of this condition, the number of operating hours shall be calculated as the total number of unit operating minutes divided by 60 rounded to the nearest hundredth of an hour. [Rules 1200, 20.3(d) (2) and 21]

Verification: The project owner shall submit facility annual operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports (AQ-SC8).

~~**AQ-46** For each calendar month and each rolling 12-calendar-month period, the project owner shall maintain records as applicable, on a calendar monthly basis, of aggregate mass emissions of NO_X (calculated as NO_2), CO, VOCs (calculated as methane), PM10, and SO_X (calculated as SO_2) in tons for the emission units described in District Applications No. 985745, 985747, and 985748, except for emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1 (d) (1). These records shall be made available for inspection within 15 calendar days after the end of each calendar month. [Rules 20.3(d) (3), 20.3(d) (8) and 21]~~

~~**Verification:** The project owner shall provide emissions summary data in compliance with this condition as part of the Quarterly Operation Reports **(AQ-SC8)**. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.~~

AQ-47~~49~~ For each combustion turbine, the number of startup periods occurring in each calendar year shall not exceed **400**~~1460~~. **When determining compliance with this limit, any startup that occurs during the commissioning period shall not be included**. [Rules 1200, **20.3(d) (2)** and 21]

Verification: The project owner shall submit facility annual operating data demonstrating compliance with this condition as part of the fourth quarter's Quarterly Operation Reports **(AQ-SC8)**.

AQ-50 For each combustion turbine, the number of startup periods occurring during the commissioning period shall not exceed 350 for the duration of the project. [Rules 1200, 20.3(d) (2) and 21]

Verification: The project owner shall provide emissions summary data in compliance with this condition as part of the Quarterly Operation Reports (AQ-SC8). The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

Ammonia – SCR

AQ-48~~51~~ Not later than 90 calendar days prior to the start of construction, **unless a later date is approved in writing by the District,** the project owner shall submit to the District the final selection, design parameters and details of the selective catalytic reduction (SCR) and oxidation catalyst emission control systems for the combustion turbines including, but not limited to, the minimum ammonia injection temperature for the SCR; the catalyst volume, **catalyst material, catalyst manufacturer,** space velocity and area velocity at full load ~~with and without steam injection~~; and control efficiencies of the SCR **for controlling NOx emissions** and the oxidation catalyst **for controlling** CO **and VOC emissions** at temperatures between ~~100 °F and 1,000 °F~~ **the minimum and maximum operating temperatures** at space velocities corresponding to 100 percent ~~(with steam injection)~~ and **25**~~60~~ percent load. Such information may be submitted to the District as trade secret and confidential pursuant to District Rules 175 and 176. [Rules 20.3(d) (1) and 14]

Verification: The project owner shall submit to the CPM for review and District for approval final selection, design parameters and details of the SCR and oxidation catalyst emission control systems at least 90 days prior to the start of construction.

AQ-49~~52~~ When a combustion turbine is operating, ammonia shall be injected at all times that the associated selective catalytic reduction (SCR) system outlet temperature is **540**~~450~~ degrees Fahrenheit or greater. [Rule 20.3 (d) (1)]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-50~~53~~ Continuous monitors shall be installed on each SCR system prior to their initial operation to monitor or calculate, and record the ammonia solution injection rate in pounds per hour and the SCR outlet temperature in degrees

Fahrenheit for each unit operating minute. The monitors shall be installed, calibrated and maintained in accordance with a District approved protocol, which may be part of the CEMS protocol. This protocol, which shall include the calculation methodology, shall be submitted to the District for written approval at least 90 days prior to initial startup of the gas turbines with the SCR system**, unless a later date is approved in writing by the District**. The monitors shall be in full operation at all times when the turbine is in operation. [Rule 20.3(d) (1)]

Verification: The project owner shall submit to the CPM for review and the District for approval a turbine operation monitoring protocol in compliance with this condition at least 90 days prior to the initial startup.

AQ-~~51~~54 Except during periods when the ammonia injection system is being tuned or one or more ammonia injection systems is in manual control for compliance with applicable permit conditions, the automatic ammonia injection system serving the SCR system shall be in operation in accordance with manufacturer's specifications at all times when ammonia is being injected into the SCR system. Manufacturer specifications shall be maintained on site and made available to District personnel upon request. [Rule 20.3(d) (1)**, 21**]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~52~~55 The concentration of ammonia solution used in the ammonia injection system shall be less than 20 percent ammonia by weight. Records of ammonia solution concentration shall be maintained on site and made available to District personnel upon request. [Rule**s** 14**, 21**]

Verification: The project owner shall maintain on site and provide on request of the CPM or District the ammonia delivery records that demonstrate compliance with this condition.

~~**Testing witnessed by the District, a proposed test protocol shall be submitted to the District for written approval at least 60 days prior to source testing. Additionally, the District shall be notified a minimum of 30 days prior to the test so that observers may be present unless otherwise authorized in writing by the District. [Rules 20.3(d) (1) and 1200 and 40 CFR Part60 Subpart KKKK and 40 CFR**~~

TESTING

AQ-~~53~~56 All source test or other tests required by this permit/license shall be performed by the District or an independent contractor approved by the District. Unless otherwise specified in this permit or authorized in writing by the District, if testing will be performed by an independent contractor and witnessed by the District, a proposed test protocol shall be submitted to the District for written approval at least 60 days prior to source testing. Additionally, the District shall be notified a minimum of 30 days prior to the test so that observers may be present unless otherwise authorized in writing

by the District. [Rules 20.3(d) (1) and 1200 and 40 CFR Part 60 Subpart KKKK and 40 CFR §60.8]

Verification: The project owner shall submit to the CPM for review and the District for approval the initial source test protocol at least 60 days prior to the initial source test. The project owner shall notify the CPM and District no later than 30 days prior to the proposed source test date and time.

AQ-~~54~~57 Unless otherwise specified in this permit or authorized in writing by the District, within 45 days after completion of a source test or **Relative Accuracy Test Audit** (RATA) performed by an independent contractor, a final test report shall be submitted to the District for review and approval. [Rules 20.3(d) (1) and 1200 and 40 CFR Part 60 Subpart KKKK, 40 CFR §60.8, and 40 CFR Part 75]

Verification: The project owner will submit all RATA or source test reports to the CPM for review and the District for approval within 45 days of the completion of those tests.

AQ-58 **All testing conducted to measure concentrations or emissions of Volatile Organic Compounds (VOCs) shall include measurement of formaldehyde and the result shall be added to the result determined for other VOC concentrations or emissions, as applicable. Measurement of VOC emissions shall be conducted in accordance with EPA Method 18, or alternative methods approved by the District and EPA. Measurement of emissions of formaldehyde shall be conducted in accordance with EPA Method 316 or 323 or alternative method approved by the District and EPA.**

Verification: **The project owner shall submit to the CPM for review and the District for approval the initial source test protocol and source test report within the timeframes specified in Conditions AQ-56 and AQ-57.**

AQ-~~55~~59 The exhaust stacks for each combustion turbine shall be equipped with source test ports and platforms to allow for the measurement and collection of stack gas samples consistent with all approved test protocols. The ports and platforms shall be constructed in accordance with District Method 3A, Figure 2, and approved by the District. Ninety days prior to construction of the turbine stacks the project owner shall provide to the District for written approval detailed plan drawings of the turbine stacks that show the sampling ports and demonstrate compliance with the requirements of this condition. [Rule 20]

Verification: The project owner shall submit to the CPM for review and District for approval a stack test port and platform plan at least 90 days before the construction of the turbine stacks.

AQ-~~56~~60 Not later than 60 calendar days after completion of the commissioning period for each combustion turbine, an Initial Emissions Source Test shall be conducted on that turbine to demonstrate compliance with the NO_X, CO, VOC, PM10, and ammonia emission standards of this permit. The source test protocol shall comply with all of the following requirements:

a) Measurements of NO_X, CO concentrations and emissions and oxygen (O_2) concentration shall be conducted in accordance with U.S. Environmental Protection Agency (EPA) methods 7E, 10, and 3A, respectively, and District source test Method 100, or alternative methods approved by the District and EPA;

b) Measurement of VOC concentrations and emissions, except for formaldehyde, shall be conducted in accordance with EPA Method~~s 25A and/or~~ 18, or an alternative method~~s~~ approved by the District and EPA;

c) Measurement of formaldehyde concentrations and emissions shall conducted in accordance with EPA Method 316 or 323, as specified by the District, or an alternative method approved by the District and EPA;

d) Total VOC concentrations and emissions shall be the sum of those concentrations and emissions determined using Method 18 and the formaldehyde concentrations and emissions;

e) Measurements of ammonia concentrations ~~emissions~~ shall be conducted in accordance with Bay Area Air Quality Management District Method ST-1B or an alternative method approved by the District and EPA;

f) Measurements of PM10 emissions shall be conducted in accordance with EPA Methods 201A and 202 or alternative methods approved by the district and EPA;

g) Source testing shall be performed at the normal load level, as specified in 40 CFR Part 75 Appendix A Section 6.5.2.1 (d), provided it is not less than 80 percent of the combustion turbine's rated load unless it is demonstrated to the satisfaction of the District that the combustion turbine cannot operate under these conditions . If the demonstration is accepted, then emissions source testing shall be performed at the highest achievable continuous power level. The District may specify additional testing at different load levels or operational conditions to ensure compliance with the emission and concentration limits of this permit and District Rules and Regulations;

~~h)~~ Measurements of particulate matter emissions shall be conducted in accordance with SDAPCD Method 5 or an alternative method approved by the District and EPA; ~~and~~

i) Measurements of opacity shall be conducted in accordance with EPA Method 9 or an alternative method approved by the District and EPA~~.~~; and

j) Unless otherwise authorized in writing by the District, testing for NO_X, CO, VOC, PM10 and ammonia concentrations and emissions, as applicable, shall be conducted concurrently with the NO_X and CO continuous emission measurement system (CEMS) Relative Accuracy Test Audit (RATA).

[Rule 20.3(d) (1) and 1200]

Verification: The project owner shall submit to the CPM for review and the District for approval the initial source test protocol and source test report within the timeframes specified in Conditions **AQ-~~53~~56** and **AQ-~~54~~57**.

AQ-~~57~~61 A renewal source test and a NO_X and CO Relative Accuracy Test Audit (RATA) shall be periodically conducted on each combustion turbine to demonstrate compliance with the NO_X, CO, VOC, PM10, and ammonia emission standards of this permit and applicable relative accuracy requirements for the CEMS systems using District approved methods. The renewal source test and the NO_X and CO RATAs shall be conducted in accordance with the applicable RATA frequency requirements of 40 CFR 75, Appendix B, Sections 2.3.1 and 2.3.3. The renewal source test shall be conducted in accordance with a protocol complying with all the applicable requirements of the source test protocol for the Initial Emissions Source Test. [Rules 69.3, 69.3.1, and 20.3(d)(1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall submit to the CPM for review and the District for approval the periodic RATA and source test protocols, and RATA source test reports within the timeframes specified in Conditions **AQ-~~53~~56** and **AQ-~~54~~57**.

AQ-~~58~~62 Relative Accuracy Test Audit (RATAs) and all other required certification tests shall be performed and completed on the NO_X CEMS in accordance with applicable provisions of 40 CFR Part 75 Appendix A and B and 40 CFR §60.4405 and on the CO CEMS in accordance with applicable provisions of 40 CFR Part 60 Appendix B and F. [Rule 21, Rule 20.3 (d) (1), 40 CFR Part 60 Subpart KKKK and 40 CFR Part 75]

Verification: The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval as required by Condition **AQ-~~54~~57**.

AQ-~~59~~63 Not later than 60 calendar days after completion of the commissioning period for each combustion turbine, an initial emission source test for toxic air contaminants shall be conducted on that turbine to determine the emissions of toxic air contaminants from the combustion turbines. At a minimum the following compounds shall be tested for, and emissions, if any, quantified:

a) Acetaldehyde

b) Acrolein

c) Benzene

d) Formaldehyde

e) Toluene

f) Xylenes

This list of compounds may be adjusted by the District based on source test results to ensure compliance with District Rule 1200 and other conditions of this permit is demonstrated. The District may require one or more or additional compounds to be quantified through source testing as needed to ensure compliance with Rule 1200 and other conditions of this permit. Within 60 calendar days after completion of a source test performed by an independent contractor, a final test report shall be submitted to the District for review and approval. [Rule 1200]

Verification: The results and field data collected during source tests required by this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

AQ-~~60~~64 The District may require one or more of the following compounds, or additional compounds to be quantified through source testing periodically to ensure compliance with ~~r~~**R**ule 1200 and other conditions of this permit **and** to **quantify toxic emissions**:

a) Acetaldehyde

b) Acrolein

c) Benzene

d) Formaldehyde

e) Toluene

f) Xylenes

If the District requires the project owner to perform this source testing, the District shall request the testing in writing a reasonable period of time prior to the testing date. [Rule 1200**, California H&S Code §41510**]

Verification: The results and field data collected during source tests required by the District under this condition shall be submitted to the CPM for review and the District for approval within 60 days of testing.

AQ-~~61~~65 The higher heating value of the combustion turbine fuel shall be measured by ASTM D1826–94, Standard Test Method for Calorific Value of Gases in

Natural Gas Range by Continuous Recording Calorimeter or ASTM D1945–96, Standard Method for Analysis of Natural Gas by Gas Chromatography or an alternative test method approved by the District and EPA. [Rules 69.3, 69.3.1, and 20.3(d) (1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~62~~66 The sulfur content of the combustion turbine fuel shall be sampled not less than once each calendar quarter in accordance with a protocol approved by the District, which shall be submitted to the District for approval not later than 90 days before the ~~earlier~~**earliest** ~~of the~~ initial startup date~~s~~ for **any**~~either~~ of the ~~two~~ combustion turbines and measured with ASTM D1072–90 (Reapproved 1994), Standard Test Method for Total Sulfur in Fuel Gases; ASTM D3246–05, Standard Test Method for Sulfur in Petroleum Gas by Oxidative Microcoulometry; ASTM D4468–85 (Reapproved 2000), Standard Test Method for Total Sulfur in Gaseous Fuels by Hydrogenolysis and Rateometric Colorimetry; ASTM D6228–98 (Reapproved 2003), Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Flame Photometric Detection; or ASTM D6667–04, Standard Test Method for Determination of Total Volatile Sulfur in Gaseous Hydrocarbons and Liquefied Petroleum Gases by Ultraviolet Fluorescence or an alternative test method approved by the District and EPA. [Rule 20.3-(d) (1), Rule 21, and 40 CFR Part 75]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

CONTINUOUS MONITORING

AQ-~~63~~67 The project owner shall comply with the applicable continuous emission monitoring requirements of 40 CFR Part 75. [40 CFR Part 75.]

Verification: The project owner shall maintain a copy of the CEMS protocol required by **AQ-~~65~~69** on site and provide it, other CEMS data, and the CEMS for inspection on request by representatives of the District, ARB, and the Energy Commission.

AQ-~~64~~68 A continuous emission monitoring system (CEMS) shall be installed on each combustion turbine and properly maintained and calibrated to measure, calculate, and record the following, in accordance with the District approved CEMS protocol:

A. Hourly average(s) concentration of oxides of nitrogen (NO_X) uncorrected and corrected to 15 percent oxygen, in parts per million (ppmvd), necessary to demonstrate compliance with the NO_X limits of this permit;

B. Hourly average concentration of carbon monoxide (CO) uncorrected and corrected to 15 percent oxygen, in parts per million (ppmvd), necessary to demonstrate compliance with the CO and VOC limits of this permit;

C. Percent oxygen (O_2) in the exhaust gas for each unit operating minute;

~~D. Average concentration of oxides of nitrogen (NO_x) for each continuous rolling 3-hour period, in parts per million (ppmv) corrected to 15 percent oxygen;~~

D. Hourly mass emissions of oxides of nitrogen (NO_x) **calculated as NO_2**, in pounds;

E. Cumulative mass emissions of oxides of nitrogen (NO_x) **calculated as NO_2** in each startup and shutdown period, in pounds;

F. Daily mass emissions of oxides of nitrogen (NO_X) **calculated as NO_2**, in pounds;

G. Calendar monthly mass emissions of oxides of nitrogen (NO_X) **calculated as NO_2**, in pounds;

H. Rolling~~30-unit-operating-day~~**~~four-unit-operating-hour~~** four unit operating hour average concentration of oxides of nitrogen (NO_X) corrected to 15 percent oxygen, in parts per million (ppmvd);

I. Rolling ~~30-unit-operating-day~~**~~four-unit-operating-hour~~** four unit operating hour average oxides of nitrogen (NO_X) emission rate, in pounds per megawatt-hour (MWh);

J. Calendar quarter, calendar year, and rolling 12-calendar-month period mass emissions of oxides of nitrogen (NO_X), in tons;

K. Cumulative mass emissions of carbon monoxide (CO) in each startup and shutdown period, in pounds;

L. Hourly mass emissions of carbon monoxide (CO), in pounds;

M. Daily mass emission of carbon monoxide (CO), in pounds;

N. Calendar monthly mass emission of carbon monoxide (CO), in pounds;

O. Rolling 12-calendar-month period mass emission of carbon monoxide (CO), in tons;

P. Average concentration of oxides of nitrogen (NO_x) and carbon monoxide (CO) uncorrected and corrected to 15 percent oxygen, in parts per million (ppmvd), during each unit operating minute; and

Q. Average emission rate in pounds per hour of oxides of nitrogen (NO_x) **calculated as NO_2** and carbon monoxide (CO) during each unit operating minute.

[Rules 69.3, 69.3.1, and 20.3(d)(1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75.]

Verification: The project owner shall submit to the CPM for review and the District for approval a CEMS protocol, as required by **AQ-~~65~~**69, which includes description of the methods of compliance with the requirements of this condition. The project owner shall make the site available for inspection of records and equipment by representatives of the District, ARB, and the Energy Commission.

AQ-~~65~~69 No later than 90 calendar days prior to initial startup of each combustion turbine, the project owner shall submit a CEMS protocol to the District, for written approval that shows how the CEMS will be able to meet all District monitoring requirements. [Rules 69.3, 69.3.1, and 20.3(d) (1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall submit to the CPM for review and the District for approval a CEMS operating protocol at least 90 days prior to the initial startup of each combustion turbine.

AQ-~~66~~70 No later than the earlier of 90 unit operating days or 180 calendar days after each combustion turbine commences commercial operation, a Relative Accuracy Test Audit (RATA) and other required certification tests shall be performed an**d** completed on ~~the~~ that turbine's NO_x CEMS in accordance with 40 CFR Part 75 Appendix A and on the CO CEMS in accordance with 40 CFR Part 60 Appendix B. The RATAs shall demonstrate that the NO_X and CO CEMS comply with the applicable relative accuracy requirements. At least 60 calendar days prior to the test date, the project owner shall submit a test protocol to the District for written approval. Additionally, the District and U.S. EPA **Region 9** shall be notified a minimum of 45 calendar days prior to the test so that observers may be present. Within 45 calendar days of completion of this test, a written test report shall be submitted to the District for approval. For purposes of this condition, commences commercial operation is defined as the first instance when power is sold to the electrical grid. [Rules 69.3, 69.3.1, and 20.3(d) (1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall submit to the CPM for review and the District for approval the RATA certification test protocol at least 60 days prior to the RATA test and shall notify the CPM**, the U.S. EPA Region 9,** and District of the RATA test date at least 45 days prior to conducting the RATA and other certification tests. The project owner will submit all RATA or source test reports to the CPM for review and the District for approval within 45 days of the completion of those tests.

AQ-~~67~~71 A monitoring plan in conformance with 40 CFR 75.53 shall be submitted to U.S**.** EPA Region 9 and the District at least 45 calendar days prior to the

Relative Accuracy Test Audit (RATA), as required in 40 CFR 75.62. [40 CFR Part 75]

Verification: The project owner shall submit to the CPM for review and the District **and the U. S. EPA Region 9** for approval a monitoring plan in compliance with this condition at least 45 days prior to the RATA test.

AQ-~~68~~72 The oxides of nitrogen (NO_X) and oxygen (O_2) components of the CEMS shall be certified and maintained in accordance with applicable Federal Regulations including the requirements of sections 75.10 and 75.12 of title 40, Code of Federal Regulations Part 75 (40 CFR 75), the performance specifications of Appendix A of 40 CFR 75, the quality assurance procedures of Appendix B of 40 CFR 75 and the CEMS protocol approved by the District. The carbon monoxide (CO) components of the CEMS shall be certified and maintained in accordance with 40 CFR 60, Appendices B and F, unless otherwise specified in this permit, and the CEMS protocol approved by the District. [Rule**s** 69.3, 69.3.1**,** and 20.3(d) (1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall submit to the CPM for review and the District for approval a CEMS protocol, as required by **AQ-~~65~~69**, which includes description of the methods of compliance with the requirements of this condition. The project owner shall make the site available for inspection of records and equipment by representatives of the District, ARB, and the Energy Commission.

AQ-~~69~~73 The CEMS shall be in operation in accordance with the District approved CEMs protocol at all times**. When** ~~when~~ the turbine is in operation**. A**~~a~~ copy of the District approved CEMS monitoring protocol shall be maintained on site and made available to District personnel upon request. [Rules 69.3, 69.3.1, and 20.3(d)(1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall make the site available for inspection of records and equipment by representatives of the District, ARB, and the Energy Commission.

AQ-~~70~~74 When the CEMS is not recording data and the combustion turbine is operating, hourly NO_x emissions for purposes of calendar year and rolling 12-calendar-month period emission calculations shall be determined in accordance with 40 CFR 75 Subpart C. Additionally, hourly CO emissions for rolling 12-calendar-month period emission calculations shall be determined using CO emission factors to be determined from source test emission factors, recorded CEMS data, and fuel consumption data, in terms of pounds per hour of CO for the gas turbine. Emission calculations used to determine hourly emission rates shall be reviewed and approved by the District, in writing, before the hourly emission rates are incorporated into the CEMS emission data. [Rules 20.3(d)(3) and 21 and 40 CFR Part 75]

Verification: The project owner shall provide the District for approval and the CPM for review all emission calculations required by this condition, in a manner and time

required by the District, and shall provide notation of when such calculations are used in place of operating CEMS data in the Quarterly Operation Reports **(AQ-SC8)**.

AQ-~~74~~75 Any violation of any emission standard as indicated by the CEMS shall be reported to the District's compliance division within 96 hours after such occurrence. [Rule 19.2]

Verification: The project owner shall notify the District regarding any emission standard violation as required in this condition and shall document all such occurrences in each Quarterly Operation Report **(AQ-SC8)**.

AQ-~~72~~76 The CEMS shall be maintained and operated, and reports submitted, in accordance with the requirements of **R**~~r~~ule 19.2 Sections (d), (e), (f)~~=~~(1), (f)(2), (f)~~=~~(3), (f)~~=~~(4) and (f)~~=~~(5), and a CEMS protocol approved by the District. [Rule 19.2]

Verification: The project owner shall submit to the District the CEMS reports as required in this condition and shall make the site available for inspection of records and equipment by representatives of the District, ARB, and the Energy Commission.

AQ-~~73~~77 Except for changes that are specified in the initial approved CEMS protocol or a subsequent revision to that protocol that is approved in advance, in writing by the District, the District shall be notified in writing at least 30 calendar days prior to any planned changes made in the CEMS or Data Acquisition and Handling System (DAHS), including, but not limited to, the programmable logic controller, software which affects the value of data displayed on the CEMS / DAHS monitors with respect to the parameters measured by their respective sensing devices ~~or~~and any planned changes to the software that controls the ammonia flow to the SCR. Unplanned or emergency changes shall be reported within 96 hours. [Rules 69.3, 69.3.1, and 20.3(d)(1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall submit to the CPM for review and the District for approval any revision to the CEMS/DAHS or ammonia flow control software, as required by this condition, to be approved in advance at least 30 days before any planned changes are made. The project owner shall notify the District regarding any unplanned emergency changes to these software systems within 96 hours and shall document all such occurrences in each Quarterly Operation Report **(AQ-SC8)**.

AQ-~~74~~78 At least 90 calendar days prior to the Initial Emissions Source Test, the project owner shall submit a monitoring protocol to the District for written approval which shall specify a method of determining the CO/VOC surrogate relationship that shall be used to demonstrate compliance with all VOC ~~emission~~ limits **except during periods when VOC emissions or concentrations are measured by a source test as specified in this permit**. This protocol can be provided as part of the Initial Source Emissions Testing Protocol. [Rule 20.3 (d)(1)]

Verification: The project owner shall submit to the CPM for review and the District for approval the monitoring protocol as part of the initial source test protocol in compliance with requirements of this condition at least 90 days prior to the initial source test.

AQ-~~75~~79 Fuel flowmeters shall be installed and maintained to measure the fuel flow rate, corrected for temperature and pressure, to each combustion turbine. Correction factors and constants shall be maintained on site and made available to the District upon request. The fuel flowmeters shall meet the applicable quality assurance requirements of 40 CFR Part 75, Appendix D, and Section 2.1.6. [Rules 69.3, 69.3.1, and 20.3(d)(1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall submit to the CPM the natural gas usage data from the fuel flow meters as part of the Quarterly Operation Report (**AQ-SC8**).

AQ-~~76~~80 Each combustion turbine shall be equipped with continuous monitors to measure, calculate and record unit operating days and hours and the following operational characteristics:

a) Date and time;

b) Natural gas flow rate to the combustion turbine during each unit operating minute, in standard cubic feet per hour;

c) Total heat input to the combustion turbine based the fuels higher heating value during each unit operating minute, in million British thermal units per hour (MMBtu/hr);

d) Higher heating value of the fuel on an hourly basis, in million British thermal units per standard cubic foot (MMBtu/scf);

e) Stack exhaust gas temperature during each unit operating minute, in degrees Fahrenheit;

f) Combustion turbine energy output during each unit operating minute in megawatts hours (MWh); and

g) **Water injection rate in gallons per minute (gpm) or pounds per hour (lb/hr)**~~Steam turbine energy output during each unit operating minute in megawatts hours (MWh)~~.

The values of these operational characteristics shall be recorded each unit operating minute. The monitors shall be installed, calibrated, and maintained in accordance with a turbine operation monitoring protocol, which may be part of the CEMS protocol, approved by the District, which shall include any relevant calculation methodologies. The monitors shall be in full operation at all times when the combustion turbine is in operation. Calibration records for the continuous monitors shall be maintained on site and made available to the District upon request. [Rules 69.3, 69.3.1, and 20.3(d)(1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall submit to the CPM for review and the District for approval a turbine operation monitoring protocol in compliance with this condition and within the timeframes specified in **AQ-~~77~~**81 and the project owner shall make the site available for inspection of records and equipment required in this condition by representatives of the District, ARB, and the Energy Commission.

AQ-~~77~~81 At least 90 calendar days prior to initial startup of ~~the~~ each combustion turbine, the project owner shall submit a turbine monitoring protocol to the District for written approval. This may be part of the CEMS protocol. [Rule**s** 69.3, 69.3.1, and 20.3~~-~~(d)(1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall submit to the CPM for review and the District for approval a turbine monitoring protocol in compliance with this condition at least 90 days prior to the initial startup of each combustion turbine.

AQ-~~78~~82 Operating logs or Data Acquisition and Handling System (DAHS) records shall be maintained to record the beginning and end times and durations of all startup~~s,~~ **and** shutdown~~s, and tuning~~ periods to the nearest minute, quantity of fuel used in each clock hour, calendar month, and 12-calendar-month period in standard cubic feet; hours of operation each day; and hours of operation during each calendar year. For purposes of this condition, the hours of turbine operation is defined as the total minutes the turbine is combusting fuel during the calendar year divided by 60 **rounded to the nearest hundredth of an hour**. [Rules 69.3, 69.3.1, and 20.3(d)(1) and 40 CFR Part 60 Subpart KKKK, and 40 CFR Part 75]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

COMMISSIONING AND SHAKEDOWN

AQ-~~79~~83 Before the end of the commissioning period for each combustion turbine, the project owner shall install post-combustion air pollution control equipment on that turbine to minimize NO_X and CO emissions. Once installed, the post-combustion air pollution control equipment shall be maintained in good condition and shall be in full operation at all times when the turbine is combusting fuel and the air pollution control equipment is at or above its minimum operating temperature. [Rule 20.3(d)(1)]

Verification: The project owner shall provide the CPM District records demonstrating compliance with this condition as part of the monthly commissioning status report **(AQ-~~80~~84)**.

AQ-~~80~~84 **Within** ~~T~~**t**hirty calendar days after the end of the commissioning period for each combustion turbine, the project owner shall submit a written ~~progress~~ report to the District. This report shall include, at a minimum, the date the commissioning period ended, the ~~periods of~~ startup and shutdown **periods**, the emissions of NO_X and CO during startup and shutdown **periods**, and the

emissions of NO_X and CO during steady state operation. This report shall also detail any turbine or emission control equipment malfunction, upset, repairs, maintenance, modifications, or replacements affecting emissions of air contaminants that occurred during the commissioning period. All of the following continuous monitoring information shall be reported for each minute and, except for cumulative mass emissions, averaged over each hour of operation:

a) Concentration of oxides of nitrogen (NO_X) uncorrected and corrected to 15~~%~~ **percent** oxygen, in parts per million (ppmvd);

b) Concentration of carbon monoxide (CO) uncorrected and corrected to 15~~%~~ **percent** oxygen, in parts per million (ppmvd);

c) Percent oxygen (O_2) in the exhaust gas;

d) Mass emissions of oxides of nitrogen (NO_x) **calculated as NO_2,** in pounds;

e) Cumulative mass emissions of oxides of nitrogen (NO_x) **calculated as NO_2** in each startup and shutdown period, in pounds;

f) Cumulative mass emissions of carbon monoxide (CO) in each startup and shutdown period, in pounds;

g) Mass emissions of carbon monoxide (CO), in pounds;

h) Total heat input to the combustion turbine based on the fuel's higher heating value, in million British thermal units per hour (MMBtu/hr);

i) Higher heating value of the fuel on an hourly basis, in million British thermal units per standard cubic foot (MMBtu/scf);

j) Gross electrical power output of the turbine, in megawatts hours (MWh) for each hour;

k) SCR outlet temperature, in degrees Fahrenheit; and

l) **Water injection rate in gallons per minute (gpm) or pounds per hour (lb/hr).**~~Stack exhaust gas temperature, in degrees Fahrenheit.~~

The hourly average information shall be submitted in writing and in an electronic format approved by the District. The minute-by-minute information shall be submitted in an electronic format approved by the District. [Rules 69.3, 69.3.1, 20.3(d)(1) and 20.3(d)(2)]

Verification: A log of the dates, times, and cumulative unit operating hours when fuel is being combusted during the commissioning period shall be maintained by the project owner. The project owner shall submit, commencing one month from the time of gas turbine first fire, a monthly commissioning status report throughout the duration of

the commissioning phase that demonstrates compliance with the requirements listed in this condition. The monthly commissioning status report shall be submitted to the CPM by the tenth of each month for the previous month, for all months with turbine commissioning activities following the turbine first fire date. The project owner shall also provide the reporting required by this condition to the District and CPM within 30 day of completing commissioning of each turbine. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-89~~84~~85 For each combustion turbine, the project owner shall submit the following notifications to the District and U.S. EPA, Region ~~IX~~**9**:

a) A notification in accordance with 40 CFR Section 60.7(a)(1) delivered or postmarked not later than 30 calendar days after construction has commenced;

b) A notification in accordance with 40 CFR Section 60.7(a)(3) delivered or postmarked within 15 calendar days after initial startup; and

c) An Initial Notification in accordance with 40 CFR Section 63.6145(c) and 40 CFR Section 63.9(b)(2) submitted no later than 120 calendar days after the initial startup of the turbine.

In addition, the project owner shall notify the District when: (1) construction is complete by submitting a Construction Completion Notice before operating any unit that is the subject of this permit, (2) each combustion turbine first combusts fuel by submitting a First Fuel Fire Notice within five calendar days of the initial operation of the unit, and (3) each combustion turbine first generates electrical power that is sold by providing written notice within five days of this event.

[Rules 24 and 21 and ~~–~~40 CFR Part 75, 40 CFR Part 60 Subpart KKKK, 40 CFR Part §60.7, 40 CFR Part 63 Subpart YYYY, and 40 CFR Part §63.9.]

Verification: The project owner shall provide notification to the District and U.S. EPA Region ~~IX~~**9** as required by this condition and shall provide copies of these notifications as part of the final monthly commissioning status reports (**AQ-~~80~~84**) due the month after the notifications are sent.

~~**AQ-81** The three utility boilers described on District Permits to Operate No. 791, 792, and 793 shall not operate at any time one or both combustion turbines are operating. [Rules 20.3(d)(3), 20.3(d)(8) and 21 and 40 CFR §52.1]~~

~~**Verification:** The project owner shall submit to the CPM and the District the facility operating and emissions data demonstrating compliance with this condition, while the boilers regulated by this condition are still operational, as part of the monthly commissioning status report (**AQ-80**).~~

AQ-82 Beginning with the initial startup of Turbine A, aggregate emissions of oxides of nitrogen (NO_X), calculated as nitrogen dioxide (NO_2); carbon monoxide (CO); volatile organic compounds (VOCs), calculated as methane; particulate matter less than or equal to 10 microns in diameter (PM10); and oxides of sulfur (SO_X), calculated as sulfur dioxides (SO_2), from Turbine A and the emergency fire pump described in Application No. 985748, except emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1(d)(1), shall not exceed the following limits for each rolling 12-calendar-month period:

Pollutant	*Emission Limit, tons per year*
a. NO_X	*36.05*
b. CO	*169.95*
c. VOC	*11.85*
d. PM10	*19.5*
e. SO_X	*2.8*

The aggregate emissions of each pollutant shall include emissions during all times that the equipment is operating including, but not limited to, emissions during commissioning, low load operation, startup, shutdown, and tuning periods. This condition shall not apply on and after the date Turbine B completes its shakedown period. [Rules 20.3(d)(3), 20.3(d)(8) and 21]

Verification: The project owner shall submit to the CPM and the District the facility 12-month rolling operating and emissions data demonstrating compliance with this condition as part of the monthly commissioning status report (**AQ-80**).

AQ-83 Beginning with the date Turbine A completes its shakedown period, aggregate emissions of carbon monoxide (CO); particulate matter less than or equal to 2.5 microns in diameter (PM2.5); and particulate matter less than or equal to 10 microns in diameter (PM10) from the three utility boilers described on District Permits to Operate No. 791, 792, and 793, shall not exceed the following limits for each rolling 12-calendar-month period:

Pollutant	*Emission Limit, tons per year*
a. CO	*198.75*
b. PM2.5	*21.80*
c. PM10	*26.89*

The aggregate emissions of each pollutant shall include emissions during all times that the equipment is operating including, but not limited to, emissions

during startup, shutdown, and tuning periods. [Rules 20.3(d)(3), 20.3(d)(8) and 21]

Verification: The project owner shall submit to the CPM and the District the facility 12-month rolling operating and emissions data demonstrating compliance with this condition as part of the monthly commissioning status report (**AQ-80**).

AQ-84 On and after the date that Turbine B completes its shakedown period, the three utility boilers described on District Permits to Operate No. 791, 792, and 793 shall not operate. [Rules 20.3(d)(3), 20.3(d)(8) and 21]

Verification: The project owner shall submit to the CPM and the District information that the boiler regulated by this condition are no longer operational, or the steps being taken to ensure that they will not be operated, once Turbine B completes its shakedown period as part of the final monthly commissioning status report (**AQ-80**).

AQ-85 For each calendar month and each rolling 12-calendar-month period, the project owner shall maintain records on a calendar monthly basis, of aggregate mass emissions of NO_x (calculated as NO_2), CO, and PM10 in tons, for Turbine A and the emergency generator described on Application No. 985748, except for emissions or emission units excluded from the calculation of aggregate potential to emit as specified in Rule 20.1(d)(1). There records shall be made available for inspection within 15 calendar days after the end of each calendar month. [Rules 20.3(d)(3), 20.3(d)(8) and 21]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-86 For each calendar month, the project owner shall maintain records on a calendar monthly basis, of mass emissions during each calendar month of NO_x (calculated as NO_2), CO, PM10, and PM2.5, in tons, from each emission unit described on District Permits to Operate No. 791, 792, and 793. These records shall be made available for inspection within 15 calendar days after the end of each calendar month. [Rules 20.3(d)(3), 20.3(d)(8) and 21]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-87 For each calendar month and each rolling 12-calendar-month period, the project owner shall maintain records on a calendar monthly basis, of aggregate mass emissions of NO_x (calculated as NO_2), CO, PM10, and PM2.5, in tons, for the emission units described in District Permits to Operate No. 791, 792, and 793. These records shall be made available for inspection within 15 calendar days after the end of each calendar month. [Rules 20.3(d)(3), 20.3(d)(8) and 21.]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

~~**AQ-88** No later than 18 months before the initial startup of either combustion turbine, the project owner shall submit an application to the District for a significant Title V permit modification to limit the aggregate emissions of oxides of nitrogen (NO_X), calculated as nitrogen dioxide; carbon monoxide (CO); particulate matter less than or equal to 10 microns in diameter (PM10); and particulate matter less than or equal to 2.5 microns in diameter (PM2.5), from the three utility boilers described on District Permits to Operate No. 791, 792, and 793 in each rolling 12-calendar-month period as specified in this permit. The application shall include a proposed emissions calculation protocol to calculate the emissions from each emission unit. Where applicable, this protocol may rely in whole or in part on the CEMS or other monitoring protocols required by this permit. [Rules 20.3(d)(3), 20.3(d)(8), 1410 and 21.]~~

~~**Verification:** The project owner shall submit copies of all applications and protocols required by this condition to the CPM for review within 5 days of their submittal to the District and no later than 18 months before the initial startup of either combustion turbine.~~

REPORTING

AQ-~~82~~86 The project owner shall file semiannual reports in accordance with 40 CFR §60.4375. [40 CFR Part 60 Subpart KKKK]

Verification: None required.

AQ-~~83~~87 Each semiannual report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Each such semiannual compliance report shall be postmarked or delivered no later than January 30 or July 30, whichever date is the first date following the end of the semiannual reporting period. [40 CFR Part 60 Subpart KKKK and Rule 21]

Verification: The project owner shall provide the District's Compliance Division the semi-annual reports required in this condition within the due dates specified in this condition, shall provide summaries of these semi-annual reports in the Quarterly Operation Reports (AQ-SC8) following each semi-annual report, and shall provide full copies of these reports to the CPM upon request.

AQ-~~84~~88 All semiannual compliance reports shall be submitted to the District Compliance Division [40 CFR §60.7]

Verification: None required.

AQ-~~85~~89 Within 120 days of startup of each gas turbine, the owner or operator shall submit an initial notification to US EPA Region 9 in accordance with 40 CFR 63.6145(c) with the information specified in 40 CFR 63.6145(d). [40 CFR 63 Subpart YYYY]

Verification: **The project owner shall provide a copy of the initial notification required by this condition to the CPM as part of the Quarterly Operation Reports (AQ-SC8).**

CONDITIONS FOR EMERGENCY FIRE PUMP ENGINE

Verification: ~~**District Application Number 985093**~~

~~An emergency fire pump engine, Cummins diesel engine, Model CFP6E-F35, as preliminarily proposed, rated at 246 brake horsepower.~~

2014-APP-003481

Emergency fire-pump diesel engine: John Deere/Clark model JW6H-UFADF0; S/N TBD; EPA certified Tier 3, family EJDXL09.0114; 327 bhp rated at 1760 rpm; turbocharged with charge air cooler for emission control; driving an emergency fire-pump.

AQ-~~86~~90 **The exhaust stack for the emergency fire pump engine shall be a minimum of 20 feet in height above grade and a maximum of 0.5 feet in diameter at the point of release and shall not be equipped with a rain cap unless it is of flapper valve design. [Rules 1200, 20.3(d)(2)]**

Verification: **The project owner shall submit to the CPM for review the exhaust stack specification at least 60 days before the installation of the stack.**

AQ-~~90~~87~~91~~ The engine shall be EPA certified to the **applicable ~~emissions~~**2009 ~~model year or later~~ requirements for emergency fire pump engines of 40 CFR Part 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines**, based on the power rating of the engine and the engine model year**. [~~Rule 20.3(d)(1),~~ 40 CFR Part 60 Subpart IIII, and 40 CFR Part 63 Subpart ZZZZ**, 17 CCR §93115**]

Verification: The project owner shall provide to the CPM for review and approval engine documentation demonstrating compliance with the condition at least 30 days prior to purchasing the engine.

AQ-~~88~~92 This EPA certified engine shall be installed, configured, operated and maintained according to the manufacturer's emission related instructions. The owner or operator may not change any emission related settings unless those changes are permitted by the manufacturer and do not affect the engine's compliance with the emission standards to which it is certified. [40 CFR 60 subpart IIII]

Verification: **The project owner shall make the site available for inspection of equipment and records by representatives of the District, ARB, and the Energy Commission.**

AQ-~~89~~93 The engine shall be operated exclusively during emergencies as defined in Rule 69.4.1, 40 CFR Part 60 Subpart IIII or 17 CCR §93115 as applicable, or for maintenance and testing.

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~91~~9094 Engine operation for maintenance and testing purposes shall not exceed **35**~~50~~ hours per calendar year **unless otherwise required by the National Fire Protection Association (NFPA) Section 25**. ~~(ATCM reportable)~~ [Rule**s** ~~20.3(d)(1) and~~ **69.4.1, 40 CFR Part 60 Subpart IIII,**17 CCR §93115]

Verification: The project owner shall submit to the CPM the fire pump engine operating data demonstrating compliance with this condition as part of the Quarterly Operation Report **(AQ-SC8)**.

AQ-~~92~~~~91~~95 The engine shall only use CARB Diesel Fuel. [Rule**s** 20.3(d)(1), 69.4.1, and 17 CCR §93115]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~93~~~~92~~96 Visible emissions including crankcase smoke shall comply with Air Pollution Control District Rule 50. [Rule 50]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~94~~~~93~~97 The equipment described above shall not cause or contribute to public nuisance. [Rule 51]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~95~~~~94~~98 This engine shall not operate for non-emergency use during the following periods, as applicable:

a) Whenever there is any school sponsored activity, if engine is located on school grounds or

b) Between 7:30 and 3:30 PM on days when school is in session, if the engine is located within 500 feet of, but not on school grounds.

This condition shall not apply to an engine located at or near any school grounds that also serve as the student's place of residence. (ATCM reportable) [17 CCR §93115]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~96~~95~~95~~99 A non-resettable engine hour meter shall be installed on this engine, maintained in good working order, and used for recording engine operating hours. If a meter is replaced, the Air Pollution Control District's Compliance Division shall be notified in writing within ten calendar days. The written notification shall include the following information:

a) Old meter's hour reading.

b) Replacement meter's manufacturer name, model, and serial number if available and current hour reading on replacement meter.

c) Copy of receipt of new meter or of installation work order.

A copy of the meter replacement notification shall be maintained on site and made available to the Air Pollution Control District upon request. [Rule~~s~~ 69.4.1, 17 CCR §93115, and 40 CFR Part 60 Subpart IIII]

Verification: The project owner shall provide notification to the District as required by this condition and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~97~~96100 The owner or operator shall conduct periodic maintenance of this engine and add-on control equipment, if any, as recommended by the engine and control equipment manufacturers or as specified by the engine servicing company's maintenance procedure. The periodic maintenance shall be conducted at least once each calendar year. [Rule 69.4.1 **and 40 CFR Part 60 Subpart IIII**]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~97~~101 The owner or operator shall keep manuals of recommended maintenance as provided by the engine and control equipment manufacturers for at least the same period of time as the engine to which the records apply is located on site. [Rule 69.4.1 and 40 CFR Part 60 Subpart IIII]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~98~~102 The owner or operator of this engine shall maintain records of all maintenance conducted on the engine, including a description of the maintenance and date the maintenance was performed. [Rule 69.4.1 and 40 CFR Part 60 Subpart IIII]

~~The owner or operator of the engine shall maintain the following records on site for at least the same period of time as the engine to which the records apply is located at the site:~~

A. ~~Documentation shall be maintained identifying the fuel as CARB diesel;~~

B. ~~Manual of recommended maintenance provided by the manufacturer, or maintenance procedures specified by the engine servicing company; and~~

C. ~~Records of annual engine maintenance, including the date the maintenance was performed.~~

~~These records shall be made available to the Air Pollution Control District upon request. [Rule 69.4.1]~~

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~99~~103 The owner or operator shall maintain documentation for all fuel deliveries identifying the fuel as CARB diesel. [Rule 69.4.1, 17 CCR §93115, and 40 CFR Part 60 Subpart IIII]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~99~~100104 The owner or operator of this **engine**~~equipment~~ shall maintain a monthly operating log containing, at a minimum, the following:

a) Dates and times of engine operation, ~~indicating~~ whether the operation was for **compliance with the testing requirements of National Fire Protection Association (NFPA) ~~25~~**~~maintenance and testing purposes~~ or emergency use~~;~~**,** and~~,~~ the nature of the emergency~~,~~ if known;

b) Hours of operation for all uses other than those specified above and identification of the nature of that use.

[Rule 69.4.1, **40 CFR 60 subpart IIII** and 17 CCR §93115]

Verification: The project owner shall submit to the CPM the fire pump engine operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (AQ-SC8).

CONDITIONS FOR EMERGENCY ENGINE (GENERATOR)

District Application Number 2014-APP-003480

Emergency diesel engine generator: Caterpillar model C15 ATAAC; S/N TBD; EPA Certified Tier 4i, family ECPXL15.2HZA; 779 bhp rated; turbocharged with charge air cooler and exhaust gas recirculation for emission control; driving a 500 kW generator.

AQ-~~101~~105 The exhaust stack for the emergency generator engine shall be a minimum of 70 feet in height above grade and a maximum of 0.46 feet in diameter at the point of release and shall not be equipped with a rain cap unless it is of flapper valve design. [Rules 1200, 20.3(d)(2)]

Verification: The project owner shall submit to the CPM for review the exhaust stack specification at least 60 days before the installation of the stack.

AQ-~~102~~106 The engine shall be EPA certified to the applicable emissions requirements for emergency engines of 40 CFR Part 60 Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, based on the power rating of the engine and the engine model year. [40 CFR Part 60 Subpart IIII, and 40 CFR Part 63 Subpart ZZZZ, 17 CCR §93115]

Verification: The project owner shall provide to the CPM for review and approval engine documentation demonstrating compliance with the condition at least 30 days prior to purchasing the engine.

AQ-~~103~~107 This EPA certified engine shall be installed, configured, operated and maintained according to the manufacturer's emission related instructions. The owner or operator may not change any emission related settings unless those changes are permitted by the manufacturer and do not affect the engine's compliance with the emission standards to which it is certified. [40 CFR 60 subpart IIII]

Verification: The project owner shall make the site available for inspection of equipment and records by representatives of the District, ARB, and the Energy Commission.

AQ-~~104~~108 The engine shall be operated exclusively during emergencies as defined in Rule 69.4.1, 40 CFR Part 60 Subpart IIII or 17 CCR §93115 as applicable, or for maintenance and testing.

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~105~~109 Engine operation for maintenance and testing purposes shall not exceed 50 hours per calendar year. [Rule 69.4.1, 40 CFR Part 60 Subpart IIII, 17 CCR §93115]

Verification: The project owner shall submit to the CPM the emergency generator engine operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (AQ-SC8).

AQ-~~106~~110 The engine shall only use CARB Diesel Fuel. [Rules 20.3(d)(1), 69.4.1, and 17 CCR §93115]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~107~~111 Visible emissions including crankcase smoke shall comply with Air Pollution Control District Rule 50. [Rule 50]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~108~~112 The equipment described above shall not cause or contribute to public nuisance. [Rule 51]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~109~~113 This engine shall not operate for nonemergency use during the following periods, as applicable:

a) Whenever there is any school sponsored activity, if engine is located on school grounds or

b) Between 7:30 and 3:30 PM on days when school is in session, if the engine is located within 500 feet of, but not on school grounds.

This condition shall not apply to an engine located at or near any school grounds that also serve as the student's place of residence. [17 CCR §93115]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~110~~114 A non-resettable engine hour meter shall be installed on this engine, maintained in good working order, and used for recording engine operating hours. If a meter is replaced, the Air Pollution Control District's Compliance Division shall be notified in writing within ten calendar days. The written notification shall include the following information:

a) Old meter's hour reading.

b) Replacement meter's manufacturer name, model, and serial number if available and current hour reading on replacement meter.

c) Copy of receipt of new meter or of installation work order.

A copy of the meter replacement notification shall be maintained on site and made available to the Air Pollution Control District upon request. [Rule 69.4.1, 17 CCR §93115, and 40 CFR Part 60 Subpart IIII]

Verification: The project owner shall provide notification to the District as required by this condition and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~111~~115 The owner or operator shall conduct periodic maintenance of this engine and add-on control equipment, if any, as recommended by the engine and control equipment manufacturers or as specified by the engine servicing company's maintenance procedure. The periodic maintenance shall be conducted at least once each calendar year. [Rule 69.4.1 and 40 CFR Part 60 Subpart IIII]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~112~~116 The owner or operator shall keep manuals of recommended maintenance as provided by the engine and control equipment manufacturers for at least the same period of time as the engine to which the records apply is located on site. [Rule 69.4.1 and 40 CFR Part 60 Subpart IIII]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~113~~117 The owner or operator of this engine shall maintain records of all maintenance conducted on the engine, including a description of the maintenance and date the maintenance was performed. [Rule 69.4.1 and 40 CFR Part 60 Subpart IIII]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~114~~118 The owner or operator shall maintain documentation for all fuel deliveries identifying the fuel as CARB diesel. [Rule 69.4.1, 17 CCR §93115, and 40 CFR Part 60 Subpart IIII]

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-~~115~~119 The owner or operator of this engine shall maintain a monthly operating log containing, at a minimum, the following:

a) dates and times of engine operation; whether the operation was for maintenance and testing purposes or emergency use; and the nature of the emergency, if known;

b) hours of operation for all uses other than those specified above and identification of the nature of that use. [Rule 69.4.1, 40 CFR 60 subpart IIII and 17 CCR §93115]

Verification: The project owner shall submit to the CPM the emergency generator engine operating data demonstrating compliance with this condition as part of the Quarterly Operation Report (AQ-SC8).

AQ-~~116~~120 Within 120 days of startup of this engine, the owner or operator shall submit a notification to the District indicating that this source is a major source of HAP. [40 CFR 63 Subpart ZZZZ]

Verification: The project owner shall provide the notification as required to the District within the timeframe required and shall provide a copy of this notification to the CPM in the Quarterly Operation Report that follows the timing of the notification (AQ-SC8).

BIOLOGICAL RESOURCES

The conditions of certification below include the approved conditions of certification from the licensed CECP and any modifications, additions or deletions required for the amended CECP. If compliance work has begun and no changes are required for the amended project, then the project owner need not duplicate those previous compliance activities. The compliance work already performed has been duly noted.

Staff recommends including all the biological resources conditions of certification from the Commission Decision for the licensed CECP, with the exception of BIO-9, which is not applicable to the amended CECP. Staff has proposed minor edits to **BIO-6**, **BIO-7** and **BIO-8**. Staff has also made changes to **BIO-1**as proposed by the project owner (Note: **Bold and underline** is used to indicated new language, ~~strikethrough~~ is used to indicate deleted language).

Designated Biologist Selection

BIO-1 The project owner shall assign a Designated Biologist to the project. The project owner shall submit the resume of the proposed Designated Biologist, with at least three references and contact information, to the compliance project manager (CPM) for approval.

The Designated Biologist must at least meet the following minimum qualifications:

1. bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field; and

2. three years of experience in field biology or current certification from a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society; and

3. at least one year of field experience with biological resources found in or near the project area.

In lieu of the above requirements, the resume shall demonstrate to the satisfaction of the CPM, that the proposed or alternate Designated Biologist has the appropriate training and background to implement effectively the ~~applicant~~ **project owner** -proposed mitigation measures and conditions of certification.

Verification: The project owner shall submit the specified information at least 90 days prior to the start of any site (or related facilities) mobilization. No site or related facility activities shall commence until an approved Designated Biologist is available to be on site.

If a Designated Biologist needs to be replaced, the specified information of the proposed replacement must be submitted to the CPM at least ten working days prior to the termination or release of the preceding designated biologist. In an emergency, the

project owner shall immediately notify the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist is proposed to the CPM for consideration.

Designated Biologist Duties

BIO-2 The project owner shall ensure that the Designated Biologist performs the following during any site (or related facilities) mobilization, ground disturbance, grading, construction, operation, and closure activities. The Designated Biologist may be assisted by the approved biological monitor(s), but remains the contact for the project owner and CPM. The designated biologist shall:

1. advise the project owner's construction and operation managers on the implementation of the **Biological Resources** Conditions of Certification;

2. consult on the preparation of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), to be submitted by the project owner;

3. be available to supervise, conduct, and coordinate mitigation, monitoring, and other biological resource compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as wetlands and special-status species or their habitat;

4. clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions;

5. inspect active construction areas where animals may have become trapped prior to construction commencing each day. At the end of the day, inspect for the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity (i.e., parking lots) for animals in harm’s way;

6. notify the project owner and the CPM of any non-compliance with any **Biological Resources** Condition of Certification;

7. respond directly to inquiries of the CPM regarding biological resource issues;

8. maintain written records of the tasks specified above and those included in the BRMIMP. Summaries of these records shall be submitted in the monthly compliance report and the annual report; and

9. train the biological monitors as appropriate, and ensure their familiarity with the BRMIMP, Worker Environmental Awareness Program (WEAP) training, and all permits.

Verification: The Designated Biologist shall submit in the monthly compliance report to the CPM copies of all written reports and summaries that document biological resources activities. If actions may affect biological resources during operation, a Designated Biologist shall be available for monitoring and reporting. During project operation, the Designated Biologist shall submit record summaries in the annual compliance report unless his/her duties are ceased as approved by the CPM.

Biological Monitor Qualifications

BIO-3 The project owner's CPM-approved Designated Biologist shall submit the resume, at least three references, and contact information of the proposed biological monitor(s) to the CPM for approval. The resume shall demonstrate to the satisfaction of the CPM, the appropriate education and experience to accomplish the assigned biological resource tasks.

Biological monitor(s) training by the Designated Biologist shall include familiarity with the conditions of certification, BRMIMP, WEAP, and all permits.

Verification: The project owner shall submit the specified information to the CPM for approval at least 30 days prior to the start of any site (or related facilities) mobilization.

The Designated Biologist shall submit a written statement to the CPM confirming that individual biological monitor(s) has been trained including the date when training was completed. If additional biological monitors are needed during construction, the specified information shall be submitted to the CPM for approval ten days prior to their first day of monitoring activities.

Designated Biologist and Biological Monitor Authority

BIO-4 The project owner's construction and operation manager shall act on the advice of the Designated Biologist and biological monitor(s) to ensure conformance with the biological resources conditions of certification.

If required by the Designated Biologist and biological monitor(s), the project owner's construction and operation manager shall halt all site mobilization, ground disturbance, grading, construction, and operation activities in areas specified by the Designated Biologist.

The Designated Biologist shall:

1. require a halt to all activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued;

2. inform the project owner and the construction and operation manager when to resume activities; and

3. notify the CPM if there is a halt of any activities and advise the CPM of any corrective actions that have been taken, or will be instituted, as a result of the work stoppage.

If the Designated Biologist is unavailable for direct consultation, the lead biological monitor shall act on behalf of the Designated Biologist.

Verification: The project owner shall ensure that the Designated Biologist or biological monitor, notifies the CPM immediately (and no later than the following morning of the incident, or Monday morning in the case of a weekend) of any non-compliance or a halt of any site mobilization, ground disturbance, grading, construction, and operation activities. The project owner shall notify the CPM of the circumstances and actions being taken to resolve the problem.

Whenever corrective action is taken by the project owner, a determination of success or failure will be made by the CPM within five working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will require additional time before a determination can be made.

Worker Environmental Awareness Program

BIO-5 The project owner shall develop and implement a CPM-approved Worker Environmental Awareness Program (WEAP) in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or any related facilities during site mobilization, ground disturbance, grading, construction, operation and closure, is informed about sensitive biological resources associated with the project.

The WEAP must:

1. be developed by or in consultation with the Designated Biologist and consist of an on-site or training center presentation in which supporting written material and electronic media are made available to all participants;

2. discuss the locations and types of sensitive biological resources on the project site and adjacent areas;

3. present the reasons for protecting these resources;

4. present the meaning of various temporary and permanent habitat protection measures;

5. identify whom to contact if there are further comments and questions about the material discussed in the program; and

6. include a training acknowledgment form to be signed by each worker indicating that he/she received training and shall abide by the guidelines.

The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist.

Verification: At least 60 days prior to the start of ~~any project-related~~ any project-related ground disturbing activities, the project owner shall provide to the CPM two copies of the proposed WEAP and all supporting written materials and electronic media prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program.

The project owner shall provide in the monthly compliance report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. At least ten days prior to site (and related facilities) mobilization, the project owner shall submit two copies of the CPM-approved materials.

The signed training acknowledgement forms from construction shall be kept on file by the project owner for a period of at least six months after the start of commercial operation.

During project operation, signed statements for active project operational personnel shall be kept on file for six months following the termination of an individual's employment.

Biological Resources Mitigation Implementation and Monitoring Plan

BIO-6 The project owner shall submit two copies of the proposed BRMIMP to the CPM (for review and approval) and to ~~CDFG~~ **CDFW** and USFWS (for review and comment) and shall implement the measures identified in the approved BRMIMP.

The BRMIMP shall be prepared in consultation with the Designated Biologist and shall identify:

1. all biological resource mitigation, monitoring, and compliance measures proposed and agreed to by the project owner;

2. all ~~applicant~~ **project owner** -proposed mitigation measures presented in the Application for Certification;

3. all biological resource conditions of certification ~~identified as necessary~~ **in the Final Commission Decision** to avoid or mitigate impacts;

4. all biological resource mitigation, monitoring and compliance measures required in other state agency terms and conditions, such as those provided in the Regional Water Quality Control Board permits;

5. all Biological Resource mitigation, monitoring, and compliance measures required in local agency permits, such as site grading and landscaping requirements;

6. all sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation, and closure;

7. all required mitigation measures for each sensitive biological resource;

8. a detailed description of measures that shall be taken to avoid or mitigate temporary disturbances from construction activities;

9. all locations on a map, at an approved scale, of sensitive biological resource areas subject to disturbance and areas requiring temporary protection and avoidance during construction;

10. aerial photographs, at an approved scale, of all areas to be disturbed during project construction activities - one set prior to any site (and related facilities) mobilization disturbance and one set subsequent to completion of project construction. Include planned timing of aerial photography and a description of why times were chosen;

11. duration for each type of monitoring and a description of monitoring methodologies and frequency;

12. performance standards to be used to help decide if/when proposed mitigation is or is not successful;

13. all performance standards and remedial measures to be implemented if performance standards are not met;

14. a preliminary discussion of biological resources-related facility closure measures;

15. restoration and revegetation plan; and

16. a process for proposing plan modifications to the CPM and appropriate agencies for review and approval.

Verification: The project owner shall provide the specified document at least 60 days prior to **the** start of ~~any project~~ any project-related ground disturbing activities.

The CPM will determine the BRMIMP's acceptability within 45 days of receipt. If there are any permits that have not yet been received when the BRMIMP is first submitted, these permits shall be submitted to the CPM, the ~~CDFG~~ **CDFW**, and USFWS within five days of their receipt, and the BRMIMP shall be revised or supplemented to reflect the permit condition within ten days of their receipt by the project owner. Ten days prior to site (and related facilities) mobilization, the revised BRMIMP shall be resubmitted to the CPM.

The project owner shall notify the CPM no less than five working days before implementing any modifications to the approved BRMIMP to obtain CPM approval.

Any changes to the approved BRMIMP must also be approved by the CPM in consultation with ~~CDFG~~ **CDFW**, the USFWS, and appropriate agencies to ensure no conflicts exist.

Implementation of BRMIMP measures will be reported in the monthly compliance reports by the designated biologist (i.e., survey results, construction activities that were monitored, species observed). Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction closure report identifying which items of the BRMIMP have been completed; a summary of all modifications to mitigation measures made during the project's site mobilization, ground disturbance, grading, and construction phases; and which mitigation and monitoring items are still outstanding.

Impact Avoidance Mitigation Features

BIO-7 Any time the project owner modifies or finalizes the project design, all feasible measures shall be incorporated that avoid or minimize impacts to the local biological resources. The project owner shall:

1. design, install, and maintain transmission line poles, access roads, pulling sites, and storage and parking areas to avoid identified sensitive resources;

2. design, install, and maintain transmission lines and all electrical components in accordance with the *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* to reduce the likelihood of electrocutions of large birds;

3. install bird flight diverters on the overhead ground wires of proposed transmission lines (230- and 138-kV) to reduce the likelihood of bird collision with power lines; if overhead ground wires are not installed, bird flight diverters shall be placed on the conductors.

4. eliminate from landscaping plans any List A California exotic pest plants of concern as defined by the California Exotic Pest Plant Council;

5. prescribe a road sealant that is non-toxic to wildlife and plants; and

6. design, install, and maintain facility lighting to prevent side casting of light toward wildlife habitat (i.e., Agua Hedionda Lagoon); obstruction lighting shall be white flashing lights unless specifically prohibited by FAA.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP. Implementation of the measures will be reported in the monthly compliance reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed.

Mitigation Management to Avoid Harassment or Harm

BIO-8 The project owner shall implement the following measures to manage its construction site (and related facilities) in a manner to avoid or minimize impacts to local biological resources:

1. install temporary fencing and provide wildlife escape ramps for construction areas that contain steep-walled holes or trenches if outside an approved, permanent exclusionary fence. The temporary fence shall be hardware cloth or similar material that is approved by USFWS and ~~CDFG~~ **CDFW**;

2. ensure that all food-related trash is disposed of in closed containers and removed at least once a week;

3. prohibit feeding of wildlife by staff and subcontractors;

4. prohibit non-security-related firearms or weapons on site;

5. prohibit pets on site;

6. avoid work between March 1 and August 15 to avoid impacts to birds protected under the Migratory Bird Treaty Act.

   A. If this is not feasible, a survey shall be conducted for nesting birds within the project area.

   B. Should an active nest be discovered, the Designated Biologist or biological monitor shall establish an appropriate buffer zone (in which construction activities are not allowed) to avoid disturbance in the vicinity of the nest.

      - Construction activities shall not commence until the Designated Biologist or biological monitor has determined that the nestlings have fledged or that construction activities will not affect adults or newly fledged young; OR
      - The Designated Biologist or biological monitor shall develop a monitoring plan that permits the activity to continue in the vicinity of the nest while monitoring nesting activities to ensure that nesting birds are not disturbed.

7. report all inadvertent deaths of sensitive species to the biological monitor, who will notify ~~CDFG~~ **CDFW** or USFWS, as appropriate; and

8. minimize use of rodenticides and herbicides in the project area.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP. Implementation of the measures shall be reported in the monthly compliance reports by the Designated Biologist. Within 30 days after

completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how biological resource measures have been completed.

~~Future Agency Coordination~~

~~**BIO-9** In the event that the auxiliary pumps for EPS Units 4 and 5 that supply discharge water for desalination and use by the CECP cease to operate, and the CECP would require intake of ocean water, the project owner shall inform the resource agencies (i.e., NMFS, USFWS, and CDFG) and coordinate regarding compliance with Clean Water Act Section 316(b) and/or Endangered Species Act requirements, as necessary.~~

~~**Verification:** Annual reports of the operational status of Units 4 and 5 shall be submitted to the CPM and planned closure of these units shall be reported to the CPM as soon as possible. No later than 30 days prior to decommissioning of Units 4 and 5, the project owner shall provide copies of pertinent records of conversation, permit applications, associated technical reports, and permits (as applicable) to the CPM to verify that federal and state agency coordination has occurred regarding compliance with Clean Water Act Section 316(b) and/or Endangered Species Act requirements, as necessary.~~

CULTURAL RESOURCES

The conditions of certification below include the approved conditions of certification from the licensed CECP with some minor changes to **CUL-6** based on new information from the recent subsurface archaeological inventory. If compliance work has begun and no changes are required for the amended project, then the project owner need not duplicate those previous compliance activities. The compliance work already performed has been duly noted.

Modifications proposed by staff are shown in ~~strikethrough~~ for deletions and **bold underline** for additions.

CUL-1 Prior to the start of ground disturbance,[1] including tank ~~removal~~ **demolition** and soil remediation, the project owner shall obtain the services of a Cultural Resources Specialist (CRS) and one or more alternates, if alternates are needed. The CRS shall manage all monitoring, mitigation, curation, and reporting activities required in accordance with the Conditions of Certification (Conditions). The CRS may elect to obtain the services of Cultural Resources Monitors (CRMs) and other technical specialists, if needed, to assist in monitoring, mitigation, and curation activities. The project owner shall ensure that the CRS makes recommendations regarding the eligibility for listing in the California Register of Historical Resources (CRHR) of any cultural resources that are newly discovered or that may be affected in an unanticipated manner (discovery). No ground disturbance, including tank removal and soil remediation, shall occur prior to CPM approval of the CRS, unless specifically approved by the CPM. Approval of a CRS may be denied or revoked for non-compliance on this project.

CULTURAL RESOURCES SPECIALIST

The resumes for the CRS and alternate(s) shall include information demonstrating to the satisfaction of the CPM that their training and backgrounds conform to the U.S. Secretary of Interior's Professional Qualifications Standards, as published in the Code of Federal Regulations, 36 CFR Part 61. In addition, the CRS shall have the following qualifications:

1. The CRS's qualifications shall be appropriate to the needs of the project and shall include a background in anthropology, archaeology, history, architectural history, or a related field; and

2. At least three years of archaeological or historic, as appropriate, resources mitigation and field experience in California.

3. At least one year of experience in a decision-making capacity on cultural resources projects in California and the appropriate training and

[1] "Ground disturbance" includes "preconstruction site mobilization"; "construction ground disturbance"; and "construction grading, boring and trenching," as defined in the General Conditions for this project.

experience to knowledgably make recommendations regarding the significance of cultural resources.

The resumes of the CRS and alternate CRS shall include the names and telephone numbers of contacts familiar with the work of the CRS/alternate CRS on referenced projects and demonstrate to the satisfaction of the CPM that the CRS has the appropriate education and experience to accomplish the cultural resource tasks that must be addressed during ground disturbance, including tank removal and soil remediation. After all ground disturbance is completed and the CRS has fulfilled all responsibilities specified in these cultural resources conditions, the project owner may discharge the CRS, if the CPM approves. With the discharge of the CRS, these cultural resources conditions no longer apply to the activities of this power plant.

CULTURAL RESOURCES MONITORS

CRMs shall have the following qualifications:

1. a BS or BA degree in anthropology, archaeology, historical archaeology or a related field and one year's experience monitoring in California; or

2. an AS or AA degree in anthropology, archaeology, historical archaeology, or a related field, and four years experience monitoring in California; or

3. enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historical archaeology, or a related field, and two years of monitoring experience in California.

4. CRMs assigned to monitor during tank removal and soil remediation shall hold an appropriate hazardous waste operations training certificate(s).

CULTURAL RESOURCES TECHNICAL SPECIALISTS

The resume(s) of any additional technical specialists, e.g., historical archaeologist, historian, architectural historian, and/or physical anthropologist, shall be submitted to the CPM for approval.

Verification:

1. At least 45 days prior to the start of ground disturbance, including tank removal and soil remediation, the project owner shall submit the resume for the CRS, and alternate(s) if desired, to the CPM for review and approval.

2. At least ten days prior to a termination or release of the CRS, or within ten days after the resignation of a CRS, the project owner shall submit the resume of the proposed new CRS to the CPM for review and approval. At the same time, the project owner shall also provide to the approved new CRS the AFC and all cultural documents, field notes, photographs, and other cultural materials generated by the project.

3. At least 20 days prior to ground disturbance, including tank **demolition** ~~removal~~ and soil remediation, the CRS shall provide a letter naming anticipated CRMs for the project and stating that the identified CRMs meet the minimum qualifications for cultural resources monitoring required by this Condition. CRMs possessing current hazardous waste operations certificates shall be identified. If additional CRMs are obtained during the project, the CRS shall provide additional letters to the CPM identifying the CRMs and attesting to the qualifications of the CRMs, at least five days prior to the CRMs beginning on-site duties.

4. At least ten days prior to beginning tasks, the resume(s) of any additional technical specialists shall be provided to the CPM for review and approval.

5. At least ten days prior to the start of ground disturbance, including tank removal and soil remediation, the project owner shall confirm in writing to the CPM that the approved CRS will be available for on-site work and is prepared to implement the Cultural Resources Conditions.

CUL-2 Prior to the start of ground disturbance, including tank **demolition** ~~removal~~ and soil remediation, if the CRS has not previously worked on the project, the project owner shall provide the CRS with copies of the Application for Certification (AFC), data responses, and confidential cultural resources reports for the project. The project owner shall also provide the CRS and the CPM with maps and drawings showing the footprint of the power plant, all linear facilities, access roads and laydown areas. Maps shall include the appropriate U.S. Geological Survey quadrangles and a map at an appropriate scale (e.g., 1:2000 or 1 inch = 200 feet) for plotting cultural features or materials. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM. The CPM shall review submittals and, in consultation with the CRS, approve those that are appropriate for use in cultural resources planning activities.

The CRS and CRM shall coordinate their oversight of ground disturbance with the Geotechnical Investigation required by the **Facility Design** Conditions of Certification.

No ground disturbance, including tank removal and soil remediation, shall occur prior to CPM approval of maps and drawings, unless specifically approved by the CPM.

If construction of the project should proceed in phases, maps and drawings not previously provided shall be submitted prior to the start of each phase. Written notification identifying the proposed schedule of each project phase shall be provided to the CRS and CPM.

At a minimum, the CRS shall consult weekly with the project construction manager to confirm area(s) to be worked during the next week, until ground disturbance, including tank removal and soil remediation is completed.

The project owner shall notify the CRS and CPM of any changes to the scheduling of the construction phases.

Verification:

1. At least 40 days prior to the start of ground disturbance, including tank **demolition** ~~removal~~ and soil remediation, the project owner shall provide the AFC, data responses, and confidential cultural resources documents to the CRS, if needed, and the subject maps and drawings to the CRS and CPM. The CPM will review submittals in consultation with the CRS and approve maps and drawings suitable for cultural resources planning activities.
2. If there are changes to any project-related footprint, revised maps and drawings shall be provided at least 15 days prior to start of ground disturbance, including tank removal and soil remediation, for those changes.
3. If project construction is phased, if not previously provided, the project owner shall submit the subject maps and drawings 15 days prior to each phase.
4. On a weekly basis during ground disturbance, including tank removal and soil remediation, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, email, or fax.
5. Within five days of identifying changes, the project owner shall provide written notice of any changes to scheduling of construction phase.

CUL-3 Prior to the start of ground disturbance, including tank **demolition** ~~removal~~ and soil remediation, the project owner shall submit the Cultural Resources Monitoring and Mitigation Plan (CRMMP), as prepared by or under the direction of the CRS, to the CPM for review and approval. The CRMMP shall be provided in the Archaeological Resource Management Report (ARMR) format, and, per ARMR guidelines, the author's name shall appear on the title page of the CRMMP. The CRMMP shall identify general and specific measures to minimize potential impacts to sensitive cultural resources. Implementation of the CRMMP shall be the responsibility of the CRS and the project owner. Copies of the CRMMP shall reside with the CRS, alternate CRS, each monitor, and the project owner's on-site construction manager. No ground disturbance, including tank removal and soil remediation, shall occur prior to CPM approval of the CRMMP, unless specifically approved by the CPM.

The CRMMP shall include, but not be limited to, the following elements and measures:

1. A general research design that includes a discussion of archaeological research questions and testable hypotheses specifically applicable to the project area, and a discussion of artifact collection, retention/disposal, and curation policies as related to the research questions formulated in the research design. A prescriptive treatment plan may be included in the CRMMP for limited resource types. A refined research design will be prepared for any resource where data recovery is required.
2. The following statement included in the Introduction: "Any discussion, summary, or paraphrasing of the Conditions in this CRMMP is intended as

general guidance and as an aid to the user in understanding the Conditions and their implementation. The Conditions, as written in the Commission Decision, shall supersede any summarization, description, or interpretation of the Conditions in the CRMMP. The Cultural Resources Conditions of Certification from the Commission Decision are contained in Appendix A."

3. Identification of the person(s) expected to perform each of the tasks, his or her responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team.
4. A description of the manner in which Native American observers or monitors will be included, the procedures to be used to select them, their roles and responsibilities, and provisions to comply with NAHC Guidelines.
5. A statement that all cultural resources encountered shall be recorded on a Department of Parks and Recreation (DPR) form 523 and mapped and photographed. In addition, all archaeological materials retained as a result of the archaeological investigations (survey, testing, data recovery) shall be curated in accordance with the California State Historical Resources Commission's *Guidelines for the Curation of Archaeological Collections*, into a retrievable storage collection in a public repository or museum.
6. A statement that the project owner will pay all curation fees and a copy of an agreement with, or other written commitment from, a curation facility to accept artifacts from this project. Any agreements concerning curation will be retained and available for audit for the life of the project.
7. A statement that the CRS has access to equipment and supplies necessary for site mapping, photography, and recovery of any cultural resources materials that are encountered during construction and cannot be treated prescriptively.
8. A description of the contents and format of the Cultural Resources Report (CRR), which shall be prepared according to ARMR guidelines.

Verification:

1. At least 30 days prior to the start of ground disturbance, including tank **demolition** ~~removal~~ and soil remediation, the project owner shall submit the subject CRMMP to the CPM for review and approval. Ground disturbance, including tank removal and soil remediation, may not commence until the CRMMP is approved, unless specifically approved by the CPM.

2. At least 30 days prior to the start of ground disturbance, including tank **demolition** ~~removal~~ and soil remediation, a letter shall be provided to the CPM indicating that the project owner agrees to pay curation fees for any materials collected as a result of the archaeological investigations (survey, testing, data recovery).

CUL-4 The project owner shall submit the Cultural Resources Report (CRR) to the CPM for approval. The CRR shall be written by or under the direction of the CRS and shall be provided in the ARMR format. The CRR shall report on all

field activities including dates, times and locations, findings, samplings, and analyses. All survey reports, Department of Parks and Recreation (DPR) 523 forms, and additional research reports not previously submitted to the California Historical Resources Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as an appendix to the CRR.

If the project owner requests a suspension of construction activities, then a draft CRR that covers all cultural resources activities associated with the project shall be prepared by the CRS and submitted to the CPM for review and approval ~~on the same day as~~ **within 30 days of** the suspension/extension request. The draft CRR shall be retained at the project site in a secure facility until construction resumes or the project is withdrawn. If the project is withdrawn, then a final CRR shall be submitted to the CPM for review and approval at the same time as the withdrawal request.

Verification:

1. Within 90 days after completion of ground disturbance (including landscaping), the project owner shall submit the CRR to the CPM for review and approval. If any reports have previously been sent to the CHRIS, then receipt letters from the CHRIS or other verification of receipt shall be included in an appendix.

2. Within ten days after CPM approval, the project owner shall provide documentation to the CPM confirming that copies of the CRR have been provided to the SHPO, the CHRIS, and the curating institution, if archaeological materials were collected.

3. Within 30 days after requesting a suspension of construction activities, the project owner shall submit a draft CRR to the CPM for review and approval.

CUL-5 Prior to and for the duration of ground disturbance, including tank ~~removal~~ **demolition** and soil remediation, the project owner shall provide Worker Environmental Awareness Program (WEAP) training to all new workers within their first week of employment. The training shall be prepared by the CRS, may be conducted by any member of the archaeological team, and may be presented in the form of a video. The CRS shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance, including tank removal and soil remediation, is completed or suspended, but shall be resumed when ground disturbance, such as landscaping, resumes. The training shall include:

1. A discussion of applicable laws and penalties under the law;

2. Samples or visuals of artifacts that might be found in the project vicinity;

3. Instruction that the CRS, alternate CRS, and CRMs have the authority to halt construction in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the CRS;

4. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the CRS or CRM, and that redirection of work would be determined by the construction supervisor and the CRS;

5. An informational brochure that identifies reporting procedures in the event of a discovery;

6. An acknowledgement form signed by each worker indicating that he/she has received the training; and

7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

No ground disturbance, ~~including tank removal and soil remediation,~~ shall occur prior to implementation of the WEAP program, unless specifically approved by the CPM.

Verification:

17. At least 30 days prior to the beginning of ground disturbance, including tank **demolition** , the CRS shall provide the training program draft text and graphics and the informational brochure to the CPM for review and approval, and the CPM will provide to the project owner a WEAP Training Acknowledgement form for each WEAP-trained worker to sign.

18. ~~On a monthly basis, the project owner shall provide in the Monthly Compliance Report (MCR) the WEAP Training Acknowledgement forms of persons who have completed the training in the prior month and a running total of all persons who have completed training to date.~~ **The project owner shall provide in the monthly compliance report (MCR) the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. At least ten days prior to site (and related facilities) mobilization, the project owner shall submit two copies of the CPM-approved materials. The signed training acknowledgement forms from construction shall be kept on file by the project owner for a period of at least six months after the start of commercial operation.**

CUL-6 The project owner shall ensure that the CRS, alternate CRS, or CRMs monitor ~~full-time all~~ ground disturbance of ~~native~~ soils at the project site, along linear facilities and roads, and at parking and other ancillary areas, including wetlands mitigation areas, **if cultural materials are identified in these areas during these ground-disturbing activities,** to ensure there are no impacts to undiscovered resources ~~and to ensure that known resources are not impacted in an unanticipated manner~~.

~~Full-time archaeological m~~ **M**onitoring for this project shall be **restricted to** the archaeological monitoring of ~~all~~ earth-moving activities on the project site and laydown areas, including ~~tank removal and~~ soil remediation, for as long as the activities are ongoing, **in those areas where cultural materials are**

identified during these earth-moving activities. ~~Full-time a~~ Archaeological monitoring shall require at least one monitor where machines are actively disturbing ~~native~~ soils **in areas where cultural material is identified**. If an excavation area or areas are too large for one monitor to effectively observe the soil removal, one or more additional monitors shall be retained to observe the area.

In the event that the CRS believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

If future geotechnical core borings are conducted for the project, they shall be monitored and the boring cores examined by a geoarchaeologist or qualified archaeologist for the presence of cultural material. If cultural material is identified, that information shall be reported to the CPM within 24 hours. Whether or not cultural material is identified, the results of the core examinations shall be provided in a report to the CPM.

In the event that the CRS determines that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

The research design in the CRMMP shall govern the collection, treatment, retention/disposal, and curation of any archaeological materials encountered.

On forms provided by the CPM, CRMs shall keep a daily log of any monitoring and other cultural resources activities and any instances of non-compliance with the Conditions and/or applicable LORS. From these logs, the CRS shall compile a monthly monitoring summary report to be included in the Monthly Compliance Report (MCR). If there are no monitoring activities, the summary report shall specify why monitoring has been suspended.

The CRS, at his or her discretion, or at the request of the CPM, may informally discuss cultural resources monitoring and mitigation activities with Energy Commission technical staff.

Cultural resources monitoring activities are the responsibility of the CRS. Any interference with monitoring activities, removal of a monitor from duties assigned by the CRS, or direction to a monitor to relocate monitoring activities by anyone other than the CRS shall be considered non-compliance with these Conditions.

Upon becoming aware of any incidents of non-compliance with the Conditions and/or applicable LORS, the CRS and/or the project owner shall notify the CPM by telephone or e-mail within 24 hours. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the Conditions. When the issue is resolved, the CRS shall write a report describing the issue, the resolution of the issue, and the effectiveness of the

resolution measures. This report shall be provided in the next MCR for the review of the CPM.

The project owner shall **retain**~~obtain~~ a Native American monitor to monitor ground disturbance in any areas where ~~Native American artifacts are discovered in native~~ **cultural resource monitoring is required**. Informational lists of concerned Native Americans and guidelines for monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that shall be monitored. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM. The CPM will either identify potential monitors or will allow ground disturbance, including tank removal and soil remediation, to proceed without a Native American monitor.

Verification: At least 30 days prior to the start of ground disturbance, including tank removal and soil remediation, the CPM will provide to the CRS an electronic copy of a form to be used as a daily monitoring log. While monitoring is ongoing, the project owner shall include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS.

19. ~~Daily~~ **When monitoring is occurring**, **daily** the CRS shall provide a statement that "no cultural resources more than 50 years of age were discovered" to the CPM as an e-mail or in some other form acceptable to the CPM. The statement shall also include information based on the twice daily observations of soils by the archaeological monitor and indicate the likelihood of disturbing native soils. If the CRS concludes that daily reporting is no longer necessary, a letter or e-mail providing a detailed justification for the decision to reduce or end daily reporting shall be provided to the CPM for review and approval at least 24 hours prior to reducing or ending daily reporting. At least 24 hours prior to implementing a proposed change in monitoring level, documentation justifying the change shall be submitted to the CPM for review and approval.

20. At least 24 hours prior to implementing a proposed change in monitoring level, documentation justifying the change shall be submitted to the CPM for review and approval.

21. If geotechnical core borings are conducted and cultural material is identified by a geoarchaeologist or archaeologist, the CPM shall be notified within 24 hours. Within 30 days after the examination of the core borings is completed, the CRS shall provide a copy of the results of the core examinations in a report to the CPM.

CUL-7 The project owner shall grant authority to halt construction to the CRS, alternate CRS, and the CRMs in the event of a discovery. Redirection of ground disturbance, including tank removal and soil remediation, shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

In the event cultural resources more than 50 years of age or considered exceptionally significant are found, or impacts to such resources can be anticipated, construction shall be halted or redirected in the immediate vicinity of the Discovery sufficient to ensure that the resource is protected from further impacts. The halting or redirection of construction shall remain in effect until the CRS has visited the Discovery, and all of the following have occurred:

1. the CRS has notified the project owner, and the CPM has been notified within 24 hours of the discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 a.m. on Friday and 8:00 a.m. on Sunday morning, including a description of the discovery (or changes in character or attributes), the action taken (i.e. work stoppage or redirection), a recommendation of eligibility, and recommendations for mitigation of any cultural resources discoveries, whether or not a determination of significance has been made.

2. the CRS has completed field notes, measurements, and photography for a DPR 523 primary form. The "Description" entry of the 523 form shall include a recommendation on the significance of the find. The project owner shall submit completed forms to the CPM.

3. The CRS, the project owner, and the CPM have conferred, and the CPM has concurred with the recommended eligibility of the discovery and approved the CRS's proposed data recovery, if any, including the curation of the artifacts, or other appropriate mitigation; and any necessary data recovery and mitigation have been completed.

Verification:

1. At least 30 days prior to the start of ground disturbance, including tank ~~removal~~ **demolition** ~~and soil remediation~~, the project owner shall provide the CPM and CRS with a letter confirming that the CRS, alternate CRS, and CRMs have the authority to halt construction activities in the vicinity of a cultural resources discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 a.m. on Friday and 8:00 a.m. on Sunday morning.
2. Completed DPR form 523s shall be submitted to the CPM for review and approval no later than 24 hours following the notification of the CPM, or 48 hours following the completion of data recordation/recovery, whichever is more appropriate for the subject cultural resource, as determined by the CRS.

CUL-8 If fill soils must be acquired from a non-commercial borrow site or disposed of to a non-commercial disposal site, unless less-than-five-year-old surveys of these sites for archaeological resources are documented to and approved by the CPM, the CRS shall survey the borrow and/or disposal site(s) for cultural resources and record on DPR 523 forms any that are identified. When the survey is completed, the CRS shall convey the results and recommendations for further action to the project owner and the CPM, who will determine what,

if any, further action is required. If the CPM determines that significant archaeological resources that cannot be avoided are present at the borrow site, all these conditions of certification shall apply. The CRS shall report on the methods and results of these surveys in the CRR.

Verification: As soon as the project owner knows that a non-commercial borrow site and/or disposal site will be used, he/she shall notify the CRS and CPM and provide documentation of previous archaeological survey, if any, dating within the past five years, for CPM approval.

In the absence of documentation of recent archaeological survey, at least 30 days prior to any soil borrow or disposal activities on the non-commercial borrow and/or disposal sites, the CRS shall survey the site/s for archaeological resources. The CRS shall notify the project owner and the CPM of the results of the cultural resources survey, with recommendations, if any, for further action.

HAZARDOUS MATERIALS MANAGEMENT

~~Strikethrough~~ is used to indicate deleted language and **bold underline** is proposed for new language.

The conditions of certification below include the approved conditions of certification from the licensed CECP and any modifications, additions or deletions required for the amended CECP. If compliance work has begun and no changes are required for the amended project, then the project owner need not duplicate those previous compliance activities. The compliance work already performed has been duly noted.

HAZ-1 The project owner shall not use any hazardous materials not listed in **Attachment A**, below, or in greater quantities or strengths than those identified by chemical name in **Attachment A**, below, unless approved in advance by the compliance project manager (CPM).

Verification: **No later than 60 days prior to the start of the removal of ~~the~~ any above ground storage tanks or ancillary piping and ~~the~~ berms, t**~~T~~he project owner shall provide to the CPM **and to the Carlsbad Fire Department**~~, in the Annual Compliance Report,~~ a list of hazardous materials contained **and used** at the facility **site**. **An updated list shall also be provided to the CPM and the Carlsbad Fire Department no later than 60 days prior to the start of construction, 60 days prior to the start of commissioning operations, and in the Annual Compliance Report.**

HAZ-2 The project owner shall concurrently provide a Business Plan and a Risk Management Plan (RMP) prepared pursuant to the California Accidental Release Program (CalARP) to the San Diego County Department of Environmental Health, Hazardous Materials Division (HMD), and the CPM for review. After receiving comments from the San Diego County DEH HMD and the CPM, the project owner shall reflect all recommendations in the final documents. Copies of the final Business Plan and RMP shall then be provided to the San Diego County DEH HMD and the Carlsbad Fire Department for information and to the CPM for approval.

Verification: At least 30 days prior to **the initial receipt of** ~~receiving~~ any hazardous material on the site for **tank demolition**, commissioning, or operations, the project owner shall provide a copy of a final Business Plan **or updated business plan** to the CPM for approval **and to the San Diego County DEH HMD and the Carlsbad Fire Department for information**.

At least 30 days prior to delivery of aqueous ammonia to the site, the project owner shall provide the final RMP to the DEH HMD and the Carlsbad Fire Department for information and to the CPM for approval.

HAZ-3 The project owner shall develop and implement a Safety Management Plan for delivery of aqueous ammonia and other liquid hazardous materials by tanker truck. The plan shall include procedures, protective equipment

requirements, training, and a checklist. It shall also include a section describing all measures to be implemented to prevent mixing of incompatible hazardous materials including provisions to maintain lockout control by a power plant employee not involved in the delivery or transfer operation. This plan shall be applicable during construction, commissioning, and operation of the power plant.

Verification: At least 30 days prior to the **initial** delivery of any liquid hazardous material to the facility **for demolition, commissioning, or operations**, the project owner shall provide a Safety Management Plan as described above **to the City of Carlsbad Fire Department for review and comment and** to the CPM for review and approval.

HAZ-4 The aqueous ammonia storage facility shall be designed to either the ASME Pressure Vessel Code and ANSI K61.6 or to API 620. In either case, the storage tank shall be protected by a secondary containment basin capable of holding 125 percent of the storage volume or the storage volume plus the volume associated with 24 hours of rain assuming the 25-year storm. The final design drawings and specifications for the ammonia storage tank and secondary containment basins shall be submitted to the CPM.

Verification: At least 60 days prior to delivery of aqueous ammonia to the facility, the project owner shall submit final design drawings and specifications for the ammonia storage tank and secondary containment basin **to the City of Carlsbad Fire Department for review and comment and** to the CPM for review and approval.

HAZ-5 The project owner shall direct all vendors delivering aqueous ammonia to the site to use only tanker truck transport vehicles which meet or exceed the specifications of DOT Code MC-307.

Verification: At least 30 days prior to receipt of aqueous ammonia on site, the project owner shall submit copies of the notification letter to supply vendors indicating the transport vehicle specifications to the CPM for review and approval.

HAZ-6 The project owner shall direct all vendors delivering any hazardous material to the site to use only the route approved by the CPM (I-5 to Cannon Road to Avenida Encinas to the project site). The project owner shall obtain approval from the CPM if an alternate route is desired.

Verification: At least 60 days prior to receipt of any hazardous materials on site **for tank demolition, construction, or operations**, the project owner shall submit copies of the required transportation route limitation direction to the CPM for review and approval.

HAZ-7 Prior to commencing **tank demolition**~~construction~~, a site-specific **Demolition and** Construction Site Security Plan for the **tank demolition and** construction phase**s** shall be prepared and made available to the CPM for review and approval. The Construction Security Plan shall include the following:

1. perimeter security consisting of fencing enclosing the **demolition and** construction area**s**;

2. security guards;

3. site access control consisting of a check-in procedure or tag system for **demolition and** construction personnel and visitors;

4. written standard procedures for employees, contractors, and vendors when encountering suspicious objects or packages on-site or off-site;

5. protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency; and

6. evacuation procedures.

Verification: At least 30 days prior to commencing **tank demolition** ~~construction~~, the project owner shall notify the CPM **and the Carlsbad Police Department** that a site-specific **Demolition and** Construction Security Plan is available for review and **comment. After receiving comments from the Carlsbad Police Department and the CPM, the project owner shall revise the Demolition and Construction Security Plan to reflect those comments and notify the CPM that the revised plan is available for review and approval.**

HAZ-8 The project owner shall also prepare a site-specific security plan for the commissioning and operational phases that will be available to the **Carlsbad Police Department for review and comment and to the** CPM for review and approval. The project owner shall implement site security measures that address physical site security and hazardous materials storage. The level of security to be implemented shall not be less than that described below (as per NERC 2002).

The Operation Security Plan shall include the following:

1. permanent full perimeter fence or wall, at least eight feet high and topped with barbed wire or the equivalent (and with slats or other methods to restrict visibility if a fence is selected;

2. main entrance security gate, either hand operated or motorized;

3. evacuation procedures;

4. protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency;

5. written standard procedures for employees, contractors, and vendors when encountering suspicious objects or packages on site or off site;

a) a statement (refer to sample, **Attachment B**), signed by the project owner certifying that background investigations have been conducted on all project personnel. Background investigations shall be restricted to determine the accuracy of employee identity and employment history and shall be conducted in accordance with state and federal laws regarding security and privacy;

b) a statement(s) (refer to sample, **Attachment C**), signed by the contractor or authorized representative(s) for any permanent contractors or other technical contractors (as determined by the CPM after consultation with the project owner), that are present at any time on the site to repair, maintain, investigate, or conduct any other technical duties involving critical components (as determined by the CPM after consultation with the project owner) certifying that background investigations have been conducted on contractors who visit the project site;

6. site access controls for employees, contractors, vendors, and visitors;

7. a statement(s) (refer to sample, **Attachment D**), signed by the owners or authorized representative of hazardous materials transport vendors, certifying that they have prepared and implemented security plans in compliance with 49 CFR 172.880, and that they have conducted employee background investigations in accordance with 49 CFR Part 1572, subparts A and B;

8. closed circuit TV (CCTV) monitoring system, recordable, and viewable in the power plant control room and security station (if separate from the control room) with cameras able to pan, tilt, and zoom, have low-light capability, and are able to view 100 percent of the perimeter fence, the ammonia storage tank, the outside entrance to the control room, and the front gate; and,

9. Additional measures to ensure adequate perimeter security consisting of either:

   a) security guard(s) present 24 hours per day, seven days per week; **or**

   b) power plant personnel on site 24 hours per day, seven days per week, and perimeter breach detectors **or** on-site motion detectors.

The project owner shall fully implement the security plans and obtain CPM approval of any substantive modifications to those security plans. The CPM may authorize modifications to these measures, or may require additional measures such as protective barriers for critical power plant components—transformers, gas lines, and compressors—depending upon circumstances unique to the facility or in response to industry-related standards, security concerns, or additional guidance provided by the U.S. Department of Homeland Security, the U.S. Department of Energy, or the North American

Electrical Reliability Council, after consultation with both appropriate law enforcement agencies and the ~~petitioner~~ **project owner**.

Verification: At least 30 days prior to the initial receipt of hazardous materials on site **for commissioning or operations**, the project owner shall notify the **Carlsbad Police Department and the** CPM that a site-specific Operations Site Security Plan is available for review. **After receiving comments from the Carlsbad Police Department and the CPM, the project owner shall revise the Operations Site Security Plan to reflect those comments and notify the CPM that the revised plan is available for review and approval.** In the annual compliance report, the project owner shall include a statement that all current project employee and appropriate contractor background investigations have been performed, and that updated certification statements have been appended to the operations security plan. In the annual compliance report, the project owner shall include a statement that the operations security plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations.

HAZ-9 If the project owner dedicates an easement for the Coastal Rail Trail, it shall be located within the boundaries of the overall Encina Power Station Precise Development Plan area in a location mutually agreed upon with the city of Carlsbad and located west of the north/south AT&SF/North County Transit District Rail Corridor. In no event shall the project owner grant or dedicate an easement for the Coastal Rail Trail east of the Rail Corridor on the CECP site.

Verification: Not later than ten days after drafting an agreement, the project owner shall submit to the CPM for review and approval the instrument of easement dedication showing that the location mutually agreed upon with the city of Carlsbad is west of the north/south AT&SF/North County Transit District Rail Corridor.

~~**HAZ-10** The project owner shall not conduct or allow any fuel gas pipe cleaning activities on the site involving fuel gas pipe of four-inches or greater external diameter, either before placing the pipe into service or at any time during the lifetime of the facility, that involve "flammable gas blows" where natural (or flammable) gas is used to blow out debris from piping and then vented to atmosphere. Instead, an inherently safer method involving a non-flammable gas (e.g. high pressure air, nitrogen, steam) or mechanical "pigging" shall be used. The project owner shall prepare a Fuel Gas Pipe Cleaning Work Plan which shall indicate the method of cleaning to be used, what gas will be used, the source of pressurization, and whether a mechanical Pipeline Inspection Gizmo (PIG) will be used, and submit this Plan to the CBO for information, to the Carlsbad Fire Department for review and comment, and to the CPM for review and approval. Exceptions to any of these provisions will be made only if no other satisfactory method is available, and then only with the approval of the CPM after review and comment from the CBO and the Carlsbad Fire Department.~~

~~**Verification:** At least 30 days before any fuel gas pipe cleaning activities involving pipe of four-inches or greater external diameter, the project owner shall submit a copy of~~

~~the Fuel Gas Pipe Cleaning Work Plan to the CBO for information, to the Carlsbad Fire Department for review and comment, and to the CPM for review and approval.~~

HAZ-10 The project owner shall not allow any fuel gas pipe cleaning activities on site at any power unit, either before placing the pipe into service or at any time during the lifetime of the facility, that involve "flammable gas blows" where natural (or flammable) gas is used to blow out debris from piping and then vented to the atmosphere. Instead, an inherently safer method involving a non-flammable gas (e.g. air, nitrogen, steam) or mechanical pigging shall be used as per NFPA 56. A written procedure shall be developed and implemented as per NFPA 56, section 4.3.1

Verification: At least 30 days before any fuel gas pipe cleaning activities begin at any unit, the project owner shall submit a copy of the Fuel Gas Pipe Cleaning Work Plan (as described in NFPA 56, section 4.3.1) which shall indicate the method of cleaning to be used, what gas will be used, the source of pressurization, and whether a mechanical PIG will be used, to the CBO for information and to the CPM for review and approval.

LAND USE

Staff recommends retaining Condition of Certification **LAND-1** from the Final Commission Decision for the licensed CECP, as modified herein based on comments from the city of Carlsbad. Staff also recommends deleting Conditions of Certification **LAND-2** and **LAND-3** because demolition of the existing EPS facility is part of the amended CECP's project description and these conditions would be inconsistent with the agreement established between the project owner and the city of Carlsbad. (Note: New language is shown in **bold/underline**; ~~strikethrough~~ is used to indicate deleted language).

LAND-1 The project owner shall dedicate an easement for the Coastal Rail Trail within the boundaries of the overall Encina Power Station Precise Development Plan area in a location mutually agreed upon with the city of Carlsbad located west of the north/south AT&SF/North County Transit District Rail Corridor ~~within 180 days from the start of construction~~.

~~If the project owner and the city of Carlsbad cannot reach agreement on the location of the easement (for example due to public safety and security reasons) the project owner shall provide funds to the city of Carlsbad for use in the development of the Coastal Rail Trail within the city of Carlsbad. The project owner shall provide funding to the city of Carlsbad for development of the Coastal Rail Trail as approved by the Compliance Project Manager (CPM) within 180 days of the start of construction. The amount and payment of funds will be determined by an independent appraisal of property within the boundaries of the Encina Power Station that would have been provided for a Coastal Rail Trail easement. The project owner shall select an appraiser for approval by the CPM and pay all costs associated with the appraisal.~~

Verification: The project owner shall provide proof **to the compliance project manager** of easement dedication ~~or appraisal and payment~~ to the city of Carlsbad ~~within 180 days of~~ **prior to** the start of construction. **To meet this requirement, an indeterminate or blanket easement may be granted, containing provisions that it will be quitclaimed upon later dedication of a specific easement when specific redevelopment plans for the area are determined. Any easement granted to the city of Carlsbad must be subservient to and have inferior rights against later granted easements to the project owner for access or utility connections through the area west of the north/south AT&SF/North County Transit District Rail Corridor necessary for operation of the amended CECP. Within 30 days of recording the specific trail easement, the project owner shall provide a copy of the easement to the CPM.**

~~**LAND-2** On or before January 1, 2016, the project owner shall prepare and submit a Demolition, Removal, and Remediation Plan (DRRP) to the CPM, the city of Carlsbad, and the Carlsbad Redevelopment Agency. The DRRP shall propose the process, schedule, and legal requirements for the demolition, removal, and remediation of the Encina Power Station (Units 1 through 5), associated structures, the black start unit and the exhaust stack. As part of~~

completion of the DRRP, project owner shall consult with the California Energy Commission, the California Coastal Commission, the city of Carlsbad, the Carlsbad Redevelopment Agency, the San Diego Regional Water Quality Control Board, the San Diego Air Pollution Control Board, and the California Independent System Operator to ensure the DRRP best reflects the procedural and substantive requirements that will apply to the site.
On or before January 1, 2017, project owner shall prepare and submit to the CPM, the city of Carlsbad, and the Carlsbad Redevelopment Agency, a study of the estimated costs associated with implementing the DRRP.

Project owner shall demonstrate, to the CPM's satisfaction, fiscal capability to implement the DRRP prior to commencement of demolition activities. Such demonstration could be accomplished by submittal of a financial plan, deposit of funds into a dedicated account, or any combination thereof.

Verification: On or before January 1, 2016, project owner shall provide the DRRP to the CPM for review and approval and to the city of Carlsbad, the Carlsbad Redevelopment Agency, and the California Coastal Commission for review and comment. The city of Carlsbad and the Carlsbad Redevelopment Agency shall provide comments on the DRRP to the CPM and project owner within 60 days or a date mutually agreeable to project owner and the city of Carlsbad and the Carlsbad Redevelopment Agency.

On or before January 1, 2016, project owner shall submit to the CPM evidence that the redevelopment process with the Carlsbad Redevelopment Agency for redeveloping the Encina Power Station site has begun or shall submit to the CPM evidence of a later mutually agreed upon date by project owner and the Carlsbad Redevelopment Agency to begin the redevelopment process.

On or before January 1, 2017, project owner shall submit the results of the study on estimated costs of implementing the DRRP to CPM for review and approval and to the city of Carlsbad and the Carlsbad Redevelopment Agency for review and comment. The city of Carlsbad and the Carlsbad Redevelopment Agency shall provide comments on cost estimate to the CPM and project owner within 60 days or a date mutually agreeable to the project owner and the city of Carlsbad and the Carlsbad Redevelopment Agency.

The project owner shall report to the CPM on June 30, 2012 and every June 30 thereafter until notified by the CPM that reports are no longer required, as to the progress made toward satisfaction of this Condition and Condition **LAND-3**. The reports shall include all relevant information, including an assessment of the factors which continue to require that any or all of Units 1 through 5 and the black start unit remain operational.

LAND-3 On or before January 1, 2017, project owner shall submit applications for required permits and approvals for demolition, removal, and remediation of the Encina Power Station Units 1 through 5, associated structures, the black start unit and the exhaust stack.

~~Upon the commencement of commissioning activities of the project, project owner shall request permission from the California Public Utilities Commission (CPUC) and California Independent System Operator to permanently shutdown Units 1 through 5 and the black start unit. The request shall be resubmitted annually thereafter until permission is granted.~~

~~Project owner shall seek partners to complete redevelopment of the Encina Power Station according to the Demolition, Removal, and Remediation Plan (DRRP) approved by the CPM pursuant to **LAND-2**. Upon the permanent retirement of Units 1 through 5 at Encina Power Station, Project Owner shall actively pursue fiscally viable redevelopment of the Encina Power Station. Such pursuit could include selling or transferring the land and facilities to a developing entity or entering into a joint venture with one or more developers. The project owner is not expected to commence demolition and remediation without a viable city approved redevelopment plan. Redevelopment of the site to the west of the rail corridor shall be for a purpose other than the generation of electricity.~~

Verification: ~~Project Owner shall report to CPM on annual basis the status of the redevelopment efforts at the Encina Power Station. Within 60 days of receiving the report, the CPM shall schedule and hold a public workshop to present the report and solicit public comments and questions~~

NOISE & VIBRATION

NOISE-1 At least 15 days prior to the start of **any demolition activities associated with the amended CECP** ~~ground disturbance~~, the project owner shall notify **the city of Carlsbad and** all residents within one mile of the site ~~to the north and northeast and one-half mile in all other directions~~, by mail or other effective means, of the commencement of project **demolition and** construction. At the same time, the project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the **demolition,** construction**,** and operation of the **amended CECP** ~~project~~ and include that telephone number in the above notice. If the telephone is not staffed 24 hours per day, the project owner shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This telephone number shall be posted at the project site during construction in a manner visible to passersby. This telephone number shall be maintained until the amended CECP has been operational for at least one year**, and all subsequent demolition activities at the Encina Power Station have been completed**.

Verification: Prior to **the start of any demolition activities** ~~ground disturbance~~, the project owner shall transmit to the compliance project manager (CPM) a statement, signed by the project owner's project manager, stating that the above notification has been performed and describing the method of that notification, verifying that the telephone number has been established and posted at the site, and giving that telephone number.

Noise Complaint Process

NOISE-2 Throughout the **demolition of above-ground fuel oil storage tanks 1, 2, 4, 5, 6, and 7 (ASTs 1, 2, 4, 5, 6, and 7),** construction and operation of the **amended** CECP, **and demolition of the Encina Power Station,** the project owner shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The project owner or authorized agent shall:

Use the Noise Complaint Resolution Form (below), or a functionally equivalent procedure acceptable to the CPM, to document and respond to each noise complaint;

- Attempt to contact the person(s) making the noise complaint within 24 hours **(within 12 hours if the complaint is related to nighttime concrete pour)**;
- Conduct an investigation to determine the source of noise related to the complaint;
- Take all feasible measures to reduce the noise at its source if the noise is project related; and
- Submit a report documenting the complaint and the actions taken. The report shall include: a complaint summary, including final results of noise

reduction efforts, and if obtainable, a signed statement by the complainant that states that the noise problem has been resolved to the complainant's satisfaction.

Verification: Within five days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form with the CPM, documenting the resolution of the complaint. If mitigation is required to resolve a complaint and the complaint is not resolved within a three-day period **(within 24 hours for noise complaints related to nighttime concrete pour)**, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is implemented.

NOISE-3 The project owner shall submit to the CPM for review and approval a noise control program and a statement, signed by the project owner's project manager, verifying that the noise control program will be implemented throughout **the demolition of ASTs 5, 6, and 7, and** construction **and demolition activities associated with** ~~of~~ the **amended CECP** ~~project~~. The noise control program shall be used to reduce employee exposure to high noise levels during **demolition and** construction **in accordance with Title 8, California Code of Regulations, sections 5095-5099, and Title 29, Code of Federal Regulations, section 1910.95** ~~and shall also comply with applicable OSHA and Cal/OSHA standards~~.

Verification: At least 30 days prior to the start of **any demolition activities** ~~ground disturbance~~, the project owner shall submit to the CPM the noise control program and the project owner's project manager's signed statement. The project owner shall make the program available to **OSHA and** Cal/OSHA upon request.

Noise Restrictions

NOISE-4 **There shall be no operation of the power plant between midnight and 6:00 a.m. except to the extent reasonably required for reliability-related purposes or as otherwise required by the ISO Tariff.** The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that operation of the project will not cause noise levels due solely to plant operation to exceed an average of 53 dBA L_{eq} measured at monitoring locations M2 and M7. No new pure-tone components shall be caused by the project. No single piece of equipment shall be allowed to stand out as a source of noise that draws ~~legitimate~~ **project-related noise** complaints.

The measurement of power plant noise for the purposes of demonstrating compliance with this condition of certification may alternatively be made at a location, acceptable to the CPM, closer to the plant (e.g., 400 feet from the plant boundary) and this measured level then mathematically extrapolated to determine the plant noise contribution at the affected residence. The character of the plant noise shall be evaluated at the affected residential locations to determine the presence of pure tones or other dominant sources of plant noise.

a) When the project first achieves a sustained output of 80 percent or greater of rated capacity, the project owner shall conduct a community noise survey at monitoring locations M2 and M7 or at closer locations acceptable to the CPM. These surveys shall be performed during power plant operation and shall also include measurement of one-third octave band sound pressure levels to determine whether new pure-tone noise components have been caused by the project.

b) If the results from the noise survey indicate that the power plant average noise level (L_{eq}) at M2 or M7 exceeds the above value, mitigation measures shall be implemented to reduce noise to a level of compliance with this limit.

c) If the results from the noise survey indicate that pure tones are present, mitigation measures shall be implemented to eliminate the pure tones.

Verification: The survey shall take place within 30 days of the project first achieving a sustained output of 80 percent or greater of rated capacity **with all turbine generators operating**. Within 15 days after completing the survey, the project owner shall submit a summary report of the survey to the CPM. Included in the survey report shall be a description of any additional mitigation measures necessary to achieve compliance with the above-listed noise limit and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the noise survey(s).

Within 15 days of completion of the new survey(s), the project owner shall submit to the CPM a summary report of the new noise survey(s), performed as described above and showing compliance with this condition.

NOISE-5 Following the project first achieving a sustained output of 80 percent or greater of rated capacity, the project owner shall conduct an occupational noise survey to identify the noise hazardous areas in the facility.

The survey shall be conducted by a qualified person in accordance with the provisions of Title 8, California Code of Regulations sections 5095–5099 and Title 29, Code of Federal Regulations section 1910.95. The survey results shall be used to determine the magnitude of employee noise exposure.

The project owner shall prepare a report of the survey results and, if necessary, identify proposed mitigation measures that will be employed to comply with the applicable California and federal regulations.

Verification: Within 30 days after completing the survey, the project owner shall submit the noise survey report to the CPM. The project owner shall make the report available to OSHA and Cal/OSHA upon request.

Construction Time Restrictions

NOISE-6 Noisy construction **and demolition** work relating to any project features shall be restricted to the times of day delineated below:

Weekdays	7:00 a.m. to **6:00 p.m.** ~~sunset~~
Saturdays	8:00 a.m. to **6:00 p.m.** ~~sunset~~

Haul trucks and other engine-powered equipment shall be equipped with mufflers that meet all applicable regulations. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

For purposes of this condition, "noisy construction work" shall be defined as ~~steam blows and~~ any ~~other~~ project-related work that draws a ~~legitimate~~ noise complaint caused by the construction **or demolition activities associated with** ~~of~~ the CECP, as opposed to another source as ~~verified~~ **determined** by the CPM**, pursuant to NOISE-2**. ~~A legitimate **project-related noise** complaint constitutes either: a violation by the project of any noise condition of certification, which is documented by an individual or entity affected by such noise **or vibration**; or a minimum of three complaints over a 24-hour period that are **is** confirmed by the CPM, the project owner, or any local or state agency that would, but for the exclusive jurisdiction of the Energy Commission, otherwise have the responsibility for investigating noise complaints or enforcing noise mitigation.~~

Verification: Prior to **the start of the demolition of ASTs 1, 2, and 4** ~~ground disturbance~~, the project owner shall transmit to the CPM a statement acknowledging that the above restrictions will be observed throughout **the demolition of ASTs 1, 2, and 4,** the construction of the ~~project~~ **amended CECP power plant, and the subsequent demolition of the Encina Power Station**.

~~STEAM BLOW RESTRICTIONS~~

~~**NOISE-7** The project owner shall equip high pressure steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than 89 dBA measured at a distance of 50 feet.~~

~~**Verification:** At least fifteen (15) days prior to the first steam blow, the project owner shall submit to the CPM drawings or other information describing the temporary steam blow silencer and the noise levels expected.~~

Pike Driving Management

NOISE-8 The project owner shall perform pile driving in a manner to reduce the potential for any project-related noise or vibration complaints. The project owner shall notify the city of Carlsbad and the residents in the vicinity of pile driving prior to start of this activity. Vibrations from pile driving shall be limited to a peak particle velocity of 0.2 inches per second at receptors M2, M5, and M7.

Verification: At least 15 days prior to first pile driving, the project owner shall submit to the CPM a description of the pile driving technique to be employed, including calculations showing its projected noise impacts at monitoring locations M2, M5 and M7.

At least ten days prior to first production pile driving, the project owner shall notify the city of Carlsbad and the residents within one mile of the pile driving. The notification may be in the form of letters, or other effective means, as approved by the CPM. In this notification, the project owner shall state the expected start date, times, and duration of this activity, and state that it will perform this activity in a manner to reduce the potential for any project-related noise and vibration complaints. The project owner shall submit a copy of this notification to the CPM prior to the start of pile driving.

Concrete Pour Noise Control

NOISE-9 When concrete work requires continuous pouring that may extend beyond the times specified in Condition of Certification NOISE-6, the project owner shall notify the city of Carlsbad and all residences in the vicinity of the project site of the commencement date and the duration of concrete pouring activities.

The average L_{eq} noise levels from these activities shall not exceed the hourly average nighttime ambient L_{eq} levels at M2, M5, and M7, by more than five dBA, or alternatively, this activity shall be performed in a manner to ensure excessive noise is prohibited and the potential for noise complaints is reduced to the extent feasible.

At least ten days prior to concrete pouring activities that are anticipated to extend beyond the times specified in Condition of Certification NOISE-6, the project owner shall submit a statement to the CPM, specifying the time of night and the number of nights for which activities will occur, the approximate distance of activities to receptor locations M2, M5, and M7, and the expected sound levels at these receptors, and requesting an exemption to perform these activities outside of the above timeframe.

In this statement, the project owner shall either indicate that the expected sound levels from this activity will not exceed the nighttime noise limits specified above, or state that it will perform this activity in a manner to ensure excessive noise is prohibited and the potential for noise complaints is reduced to the extent feasible. The project owner shall not perform this nighttime work until the CPM has granted the request for exemption. After the above exemption is granted by the CPM and before the start of this activity, the project owner shall notify the city of Carlsbad of this approval.

At least ten days prior to concrete pouring activities, the project owner shall notify the city of Carlsbad and the residents within one mile of this work. The

notification may be in the form of letters, or other effective means as approved by the CPM. In this notification, the project owner shall state that it will perform this activity in a manner to ensure excessive noise is prohibited, and include a telephone number that will be staffed throughout this activity for use by the public to report any undesirable noise conditions associated with these activities. The project owner shall submit a copy of this notification to the CPM prior to the start of this work.

PUBLIC HEALTH

No public health conditions of certification are proposed, and staff recommends deleting the exiting condition.

~~**PUBLIC HEALTH-1** The project owner shall only use pipeline quality natural gas in the Carlsbad Energy Center Project, Encina Unit 4, Encina Unit 5 and Encina EGT.~~

~~**Verification:** The project owner shall provide a statement to the CPM in the yearly compliance report that only pipeline quality natural gas has been used to fuel the CECP and the EPS.~~

SOCIOECONOMICS

SOCIO-1 The project owner shall pay or reimburse the city of Carlsbad for costs incurred in accordance with actual services performed by the city that the city would normally receive for a power plant or similar industrial development.

Verification: The project owner shall provide **to the compliance project manager (CPM),** proof of payment prior to the start of commercial operation.

SOCIO-2 The project owner shall pay the one-time statutory school facility development fees to the Carlsbad Unified School District as required by Education Code Section 17620.

Verification: At least 30 days prior to the start of project construction, the project owner shall provide to the CPM, proof of payment to the Carlsbad Unified School District of the statutory development fee.

SOIL & WATER RESOURCES

SOIL&WATER-1: The project owner shall comply with the requirements of the San Diego County Municipal Storm Water Permit (Order **No.** R9-~~2007~~**2013**- 0001, NPDES No. **CAS0109266** ~~CAS0108758~~) and city of Carlsbad (city) Municipal Code Title 15, Chapter 15.12. The project owner shall develop and implement a Tier 3 Construction Storm Water Pollution Prevention Plan (Construction SWPPP) for the construction of the CECP site, laydown and parking areas, and all linear facilities. The Tier 3 Construction SWPPP shall be submitted to the city for review and comment and to the CPM for approval and shall contain all of the elements required by the General Permit for Construction Activities (Order No. ~~99-08~~ **2009-0009**-DWQ and its updates), the Municipal Permit (**Order No. R9-2013- 0001, NPDES No. CAS0109266**~~Order No. R9-2007-0001~~), and the city's current Storm Water Standards Manual.

Verification: Prior to site mobilization, the project owner shall submit to the compliance project manager (CPM) a copy of the Tier 3 Construction SWPPP that has been reviewed by the city and retain a copy on site.

The project owner shall submit to the CPM all copies of correspondence between the project owner and the city regarding the Tier 3 Construction SWPPP within ten days of its receipt or submittal. This information shall include copies of the Notice of Intent and Notice of Termination submitted to the State Water Resources Control Board for enrollment under the NPDES General Permit for Construction Activities.

SOIL&WATER-2: Potable water shall not be used for any construction activity**, including EPS demolition activities,** that is suitable for non-potable water use if a non-potable water source is available at the project site. Prior to site mobilization, the project owner shall submit to the CPM a Non-Potable Construction Water Use Plan (plan) for the supply and use of non-potable water in construction activities. The plan shall consider the use of recycled

water available at the site. The plan shall specify those construction activities that would use non-potable water and those construction activities that would use potable water.

Potable water use for EPS demolition activities that are suitable for non-potable water shall count toward the cumulative total limit, in accordance with SOIL&WATER-6.

Verification: Prior to site mobilization, the project owner shall submit to the CPM for review and approval the Non-Potable Construction Water Use Plan. Within the Monthly Compliance Report, the project owner shall report the volume of potable and non-potable water used and the construction activities for which each was used.

SOIL&WATER-3: The project owner shall comply with the requirements of the San Diego County Municipal Storm Water Permit ~~(Order R9-2007- 0001, NPDES No. CAS0108758)~~ and City of Carlsbad (city) Municipal Code Title 15, Chapter 15.12. The project owner shall develop and implement a Storm Water Pollution Prevention Plan (Industrial SWPPP) for the operation of CECP. The industrial SWPPP shall be submitted to the city for review and comment and to the CPM for review and approval and shall be prepared in accordance with the requirements of the NPDES General Permit for Industrial Activities (~~WQO-97-03-DQM~~ **Order No. 2014-0057-DWQ**) and the city's Storm Water Standards Manual.

Verification: Prior to commercial operation, the project owner shall submit to the CPM a copy of the Industrial SWPPP and retain a copy on site.

The project owner shall submit to the CPM all copies of all correspondence between the project owner and the city regarding the Industrial SWPPP within ten days of its receipt or submittal. This information shall include a copy of the Notice of Intent submitted to the State Water Resources Control Board for enrollment under the NPDES General Permit for Industrial Activity.

SOIL&WATER-4: The project owner shall submit to the San Diego Regional Water Quality Control Board (SDRWQCB) all information required by the SDRWQCB to obtain a Waste Discharge Requirements (WDR) Order for the discharge of ~~CECP industrial~~ **EPS demolition** wastewater to the Pacific Ocean **in accordance with NPDES requirements**. The project owner shall submit to the CPM all copies of correspondence between the project owner and the SDRWQCB regarding the WDR Order within ten days of its receipt or submittal.

Verification: At least two weeks prior to the ~~operation of the CECP ocean-water purification system~~ **start of EPS demolition activities**, the project owner shall submit to the CPM a copy of the approved WDR Order for the discharge of ~~CECP industrial~~ **EPS demolition** wastewater to the Pacific Ocean.

The project owner shall submit to the CPM the annual water quality monitoring report required by the SDRWQCB in the annual compliance report. The project owner shall

notify the CPM of all WDR Order violations, the actions taken or planned to bring the project back into compliance with the WDR Order, and the date compliance was reestablished.

SOIL&WATER-5: Prior to the use of potable water from the city of Carlsbad (city) for any purpose related to the construction or operation of the CECP, the project owner shall provide the CPM with copies of all permit(s) for the delivery and hookup of potable water. The project owner shall comply with the city's Municipal Code Title 14, Chapter 14.08 for the supply and use of potable water. Potable water shall not be used for any construction or operation activity**, including EPS demolition activities,** that is suitable for non-potable water use**, unless needed for fire protection or emergency backup supply to the recycled water service, in accordance with SOIL&WATER-6.**

Verification: No later than 30 days prior to the connection to the city's potable water system, the project owner shall provide the CPM with copies of all permits for the delivery and hookup of potable water.

The project owner shall submit to the CPM any water quality monitoring reports required by the city in the annual compliance report. The project owner shall notify the CPM of any violations of the permit(s) and conditions, the actions taken or planned to bring the project back into compliance with the permit(s), and the date compliance was reestablished.

SOIL&WATER-6: During normal operation the project shall use no more than three acre-feet per year of potable water for drinking, sanitary, and fire protection testing purposes. The project shall use recycled water for all industrial and landscape irrigation purposes during operation of the CECP, unless potable water is needed for emergency backup use. For the purpose of this condition, the term emergency shall mean the inability of the CECP to take, or for the city of Carlsbad to deliver, recycled water to the CECP in a quantity sufficient to meet CECP demand due to Acts of God, natural disaster, and other circumstances beyond the control of the project owner, including interruption of recycled water service and it is necessary for the CECP to prepare to or continue to operate to serve a peaking load. If potable water is needed during operation for more than just an emergency use, the owner shall be required to file a formal petition to amend the project. ~~Recycled water shall also be used for EPS demolition.~~

If the CECP requires potable water for emergencies that will cumulatively exceed 300 acre-feet during the life of the project, the project owner shall file a petition to amend. All emergency water use shall be reported in annual compliance reports. Reported values shall include monthly use and cumulative lifetimes use, in acre-feet.

Prior to the use of potable **or** recycled~~, or ocean~~ water during the operation of the CECP, the project owner shall install and maintain metering devices as part of the water supply and distribution system to monitor and record in gallons per day the volume of all water sources used by the CECP. The metering devices shall be operational for the life of the project, and an annual summary of daily water use by the CECP, differentiating between potable**,** **emergency backup, and** recycled **supplies**~~, and ocean water~~, shall be submitted to the CPM in the annual compliance report.

Verification: At least 60 days prior to use of any water source for CECP operation, the project owner shall submit to the CPM evidence that metering devices have been installed and are operational on all water supply pipelines serving the project. The project owner shall provide a report on the servicing, testing, and calibration of the metering devices in the annual compliance report.

The project owner shall submit a water use summary report to the CPM in the annual compliance report for the life of the project. The annual summary report shall be based on and ~~shall~~ distinguish recorded daily use **and emergency uses** of potable **and**, recycled~~, and ocean~~ water. The report shall include calculated monthly range, monthly average, and annual use by the project in both gallons per minute and acre-feet. After the first year and for subsequent years, this information shall also include the yearly range and yearly average potable and ~~ocean~~ **recycled** water used by the project.

The project owner shall submit a petition to amend within three months of exceeding the maximum allowable 300 acre-feet of potable water for operational uses.

SOIL&WATER-7: Prior to connection to the city of Carlsbad's (city) sanitary sewer system, the project owner shall submit to the city all information and documentation required to satisfy city of Carlsbad Municipal Code Title 13, Chapters 13.04, 13.10, and 13.16 for the discharge of ~~recycled and~~ sanitary wastewater to the city's sewer system. During CECP operation, any monitoring reports provided to the city shall also be provided to the CPM. The CPM shall be notified of any violations of discharge limits or amounts.

Verification: At least 60 days prior to commercial operation, the project owner shall submit the information and documentation required to satisfy Municipal Code Title 13, Chapters 13.04, 13.10, and 13.16 and provide the CPM a copy of the city permits for the discharge of ~~recycled and~~ sanitary wastewater to the city's sewer system.

During operations, the project owner shall submit to the CPM any wastewater quality monitoring reports required by the city in the annual compliance report. The project owner shall submit any notices of violation from the city to the CPM within ten days of receipt and fully explain the corrective actions taken in the annual compliance report.

SOIL&WATER-8: If the project owner relies on recycled water for CECP water supply, the project owner shall provide the CPM two copies of the executed Recycled Water Purchase Agreement (agreement) with the recycled water

producer and the city of Carlsbad (city) for the supply and delivery of tertiary treated recycled water to the CECP. The CECP shall not connect to the city's recycled water pipeline without the final agreement in place. The project owner shall comply with the requirements of Title 22 and Title 17 of the California Code of Regulations and section 13523 of the California Water Code.

Verification: No later than 180 days prior to the connection to the city's recycled water pipeline, the project owner shall submit two copies of the executed agreement for the long-term supply and delivery of tertiary treated recycled water to the CECP. The agreement shall specify a maximum delivery rate of ~~945 gpm~~ **215 afy** and shall specify all terms and costs for the delivery and use of recycled water by the CECP.

No later than 60 days prior to connection to the city's recycled water pipeline, the project owner shall submit to the CPM a copy of the Engineering Report and Cross Connection inspection and approval report from the California Department of Public Health and all water reuse requirements issued by the San Diego Regional Water Quality Control Board.

SOIL&WATER-9: Prior to transport and disposal of any facility construction or demolition-related wastewaters offsite, the project owner shall test and classify the stored wastewater to determine proper management and disposal requirements. The project owner shall provide evidence that wastewater is disposed of at an appropriately licensed facility. The project owner shall ensure that the wastewater is transported and disposed of in accordance with the wastewater's characteristics and classification and all applicable LORS (including any CCR Title 22 Hazardous Waste and Title 23 Waste Discharges to Land requirements).

Where discharge of wastewater must comply with the San Diego Regional Water Quality Control Board (SDRWQCB) and State Water Resources Control Board regulatory requirements, the project owner shall submit a Report of Waste Discharge (ROWD) to the compliance project manager (CPM) and SDRWQCB for determination of which regulatory waiver or permit applies to the proposed discharges. The project owner shall pay all necessary fees for filing and review of the ROWD and all other related fees. Checks for such fees shall be submitted to the SDRWQCB and shall be payable to the State Water Resources Control Board. The project owner shall ensure compliance with the provisions of the waiver or permit applicable to the discharge. Where the regulatory requirements are not applied pursuant to a National Pollutant Discharge Elimination System permit, it is the Commission's intent that the requirements of the applicable waiver or permit be enforceable by both the Commission and the SDRWQCB. In furtherance of that objective, the Commission hereby delegates the enforcement of the waiver or permit requirements, and associated monitoring, inspection, and annual fee collection authority, to the

SDRWQCB. The CPM and SDRWQCB shall confer with each other and coordinate, as needed, in the enforcement of the requirements.

Verification: The project owner shall submit to the CPM copies of all relevant correspondence between the project owner and the SWRCB or SDRWQCB about the EPS demolition wastewater discharge requirements within ten days of its receipt or submittal. This information shall include copies of the Notice of Intent and Notice of Termination for the project. A letter from the SWRCB or SDRWQCB indicating that there is no requirement for the discharge of EPS demolition wastewater would satisfy this condition.

Prior to transport and disposal of any facility construction-related wastewaters offsite, the project owner shall test and classify the stored wastewater to determine proper management and disposal requirements. The project owner shall ensure that the wastewater is transported and disposed of in accordance with the wastewater's characteristics and classification and complies with all applicable LORS (including any CCR Title 22 Hazardous Waste and Title 23 Waste Discharges to Land requirements). The project owner shall provide evidence to the CPM of proper wastewater disposal, via a licensed hauler to an appropriately licensed facility, in the monthly compliance report.

Where a ROWD is submitted to the SDRWQCB to obtain the appropriate waiver or permit, the appropriate waiver or permit must be obtained at least 30 days prior to the discharge.

The project owner shall submit a copy of any correspondence between the project owner and the SDRWQCB regarding the waiver or permit and all related reports to the CPM within ten days of correspondence receipt or submittal.

TRAFFIC & TRANSPORTATION

TRANS-1 The project owner shall consult with the city of Carlsbad and prepare and submit to **the city of Carlsbad for review and comment and** the Compliance Project Manager (CPM) for approval a construction**/demolition** traffic control plan**.** ~~and implementation program which~~ **The plan shall be implemented during all phases of construction/demolition and shall** address~~es~~ the following issues:

- Timing of heavy equipment and building materials deliveries
- Redirecting construction traffic with a flag person
- Signing, lighting, and traffic control device placement if required
- Need for construction work hours and arrival/departure times outside peak traffic periods
- Ensure access for emergency vehicles to the project site
- Temporary closure of travel lanes
- Access to adjacent residential and commercial property during the construction of all pipelines
- Specify construction-related haul routes
- **Safety considerations to avoid blockage of the railroad tracks for ~~specification that~~ large vehicles with eight wheels or more, such as semi-trailer trucks, ~~use the Avenida~~ ~~Encinas exit, not~~ exiting via the SDG&E Service Gate ~~exit, when exiting the site~~ to travel east on Cannon Road ~~to avoid possible blockage of the railroad tracks~~**
- Identify safety procedures for exiting and entering the site access gate

Verification: At least 30 days prior to **tank demolition** ~~site mobilization~~, the ~~applicant or contractor~~ **project owner** shall provide **the traffic control plan** to **the city of Carlsbad for review and comment and to** the CPM ~~a copy of the referenced documents~~**for review and approval**.

TRANS-2 The project owner shall submit to the FAA Form 7460-1, Notice of Proposed Construction or Alteration, regarding **any structures or objects exceeding 140 feet in height used during construction or operation of** the Carlsbad Energy Center Project (CECP)**, or during any related activities, such as demolition of the Encina Power Station,** ~~stack~~ and shall secure a Determination of No Hazard to Navigable Airspace **for each structure or object**. The **structures or objects** ~~stacks~~ shall **be marked and lit as** ~~have all lighting and marking~~ required by the FAA so that the**y** ~~stacks~~ do not create a hazard to air navigation.

Verification: At least 30 days prior to the start of **tank demolition,** ~~construction,~~ the ~~Project Owner or contractor~~ **project owner** shall provide copies of the FAA Form 7460-1 and copies of the FAA Determination of No Hazard to Navigable Airspace to the CPM**,**

~~and~~ the city of Carlsbad Planning Department**, and the county of San Diego at McClellan-Palomar Airport**. The project owner shall also provide pictures of **lit and marked** ~~the~~ **structures or objects** ~~CECP stack~~ after the lighting and marking have been completed.

TRANS-3 Prior to start-up and testing activities of the plant and all related facilities, the project owner shall work with the FAA **and the county of San Diego at McClellan-Palomar Airport** to notify all pilots using the McClellan-Palomar Airport and airspace above the CECP of potential air hazards. These activities would include, but not be limited to, the ~~applicant's~~ **project owner** working with the FAA in issuing a notice to airmen (NOTAM) of the identified air hazard and updating the Terminal Area Chart and all other FAA-approved airspace charts used by pilots that include the CECP site to indicate that pilots should avoid direct overflight.

Verification: At least 60 days prior to start of project operation, the project owner shall submit to the CPM for review and approval a letter from the FAA showing compliance with these measures.

TRANS-4 ~~Prior to~~ **During project** construction**/demolition** ~~of the plant and all related facilities~~, the project owner shall ~~develop~~ **implement** a **rail** crossing safety plan ~~for all phases of project construction~~ to address foot traffic as well as construction- **and demolition-**related vehicle crossing and the transport of heavy/oversize loads over the internal rail crossing.

Verification: At least 60 days prior to **the** start of **tank demolition,** ~~site mobilization,~~ the project owner shall submit the **rail crossing safety** plan to the CPM for review and approval.

TRANS-5 **During and** ~~F~~ollowing completion of project construction **and demolition**, the project owner shall repair any damage to roadways affected by construction**/demolition** activity **to pre-project road conditions or better. Restoration of significant damage which could cause hazards (such as potholes, deterioration of pavement edges, or damaged signage) shall take place immediately after the damage has occurred.**~~along with the primary roadways identified in the traffic control plan for construction traffic to the road's pre-project construction condition.~~ Prior to the start of **demolition and** construction, the project owner shall photograph **or** videotape~~, or digitally record images of the~~ **all** roadways that will be affected by pipeline construction and heavy ~~construction~~ **truck** traffic. The project owner shall provide the CPM and the city of Carlsbad with a copy of the images for the roadway segments under its jurisdiction. Also, prior to start of **demolition and** construction, the project owner shall notify the city about the schedule for project **demolition/**construction. The purpose of this notification is to **allow the city the opportunity to** postpone any planned roadway resurfacing and/or improvement projects until after the project **demolition/**construction has taken place and to coordinate **demolition/**construction-related activities associated with other projects.

Verification: **If damage to public roads, easements, or rights-of-way occurs during demolition and construction, the project owner shall notify the CPM, and the city of Carlsbad if the damage occurs in their jurisdiction, to identify the sections to be repaired. At that time, the project owner and CPM shall establish a schedule for completion and approval of the repairs. The project owner shall provide monthly inspection reports of the condition of the roadways during the demolition and construction period, and roadway repairs undertaken during that period. Following completion of any repairs in the city of Carlsbad's jurisdiction, the project owner shall provide the CPM with letters signed by the city of Carlsbad stating their satisfaction with the repairs.**

Within 30 days after completion of **all project-related construction and demolition (completion of Phase IV),** ~~the redevelopment project,~~ the project owner shall meet with the CPM and the city of Carlsbad to determine**,** ~~and~~ receive approval for**, and schedule** the actions necessary ~~and schedule~~ to complete the repair of identified sections of public roadways to original **condition or better** or as near-original condition as possible. Following completion of any regional road improvements, the project owner shall provide to the CPM a letter from the city of Carlsbad if work occurred within its jurisdictional public right-of-way stating its satisfaction with the road improvements.

TRANS-6 The project owner shall comply with Caltrans**'** and other relevant jurisdictions**'** limitations on vehicle sizes and weights. In addition, the project owner shall obtain necessary transportation permits from Caltrans and all relevant jurisdictions for roadway use.

Verification: In the Monthly Compliance Reports, the project owner shall submit copies of any permits received during that reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

TRANS-7 During **project** construction**/demolition,** ~~of the plant and all related facilities~~, the project owner shall ~~develop~~ **implement** a parking and staging plan for ~~all phases of~~ project construction **and demolition** to enforce a policy that all project-related parking occurs on site or in designated off-site parking areas.

Verification: At least 60 days prior to start of **tank demolition,** ~~site mobilization,~~ the project owner shall submit ~~the~~ **a parking and staging** plan to the city of Carlsbad and other jurisdictions affected by site selection, such as the city and/or county of San Diego, for review and comment and to the CPM for review and approval.

TRANS-8 The project owner shall comply with limitations for encroachment into public rights-of-way imposed by Caltrans and other relevant jurisdictions and shall obtain necessary encroachment permits from Caltrans and all relevant jurisdictions.

Verification: In Monthly Compliance Reports, the project owner shall submit copies of permits received during the reporting period. In addition, the **project owner** ~~applicant~~ shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

TRANSMISSION LINE SAFETY & NUISANCE

TLSN-1 The project owner shall ensure that the proposed 138-kV and 230-kV transmission lines are constructed according to the respective requirements of California Public Utility Commission's GO-95, GO-52, GO-131-D, GO-128, Title 8, and Group 2, High Voltage Electrical Safety Orders, Sections 2700 through 2974 of the California Code of Regulations, and San Diego Gas & Electric's EMF-reduction guidelines.

Verification: At least 30 days before starting construction of the transmission lines or related structures and facilities, the project owner shall submit to the compliance project manager (CPM) a letter signed by a California registered electrical engineer affirming that the lines will be constructed according to the requirements stated in the condition.

TLSN-2 The project owner shall use a qualified individual to measure the strengths of the electric and magnetic fields from each transmission line at the points of maximum intensity along its route. The measurements shall be made after energization according to the American National Standard Institute/Institute of Electrical and Electronic Engineers (ANSI/IEEE) standard procedures. These measurements shall be completed not later than six months after the start of operations.

Verification: The project owner shall file copies of the post-energization measurements with the CPM within 60 days after completion of the measurements.

TLSN-3 The project owner shall ensure that the rights-of-way of the proposed transmission lines are kept free of combustible material, as required under the provisions of section 4292 of the Public Resources Code and Section 1250 of Title 14 of the California Code of Regulations.

Verification: During the first five years of plant operation, the project owner shall provide a summary of inspection results and any fire prevention activities carried out along the right-of-way of each line and provide such summaries in the Annual Compliance Report.

TLSN-4 The project owner shall ensure that all permanent metallic objects within the right-of-way of each of the two project-related transmission lines are grounded according to existing industry practices.

Verification: At least 30 days before the lines are energized, the project owner shall transmit to the CPM a letter confirming compliance with this condition.

VISUAL RESOURCES

Surface Treatment of Project Structures and Buildings

VIS-1 The project owner shall treat the surfaces of all project structures and buildings visible to the public such that a) their colors minimize visual intrusion and contrast by blending with the landscape; b) their colors and finishes do not create excessive glare; and c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive.

Surface color treatment shall include painting of ~~HRSGs,~~ turbine inlet filters, and other features in a dark color and value to match the surrounding tree canopy; and painting of exhaust stacks **and transmission poles** of a light color and value to blend with the sky.

The project owner shall submit for CPM review and approval, a specific surface treatment plan that will satisfy these requirements. The treatment plan shall include:

a) A description of the overall rationale for the proposed surface treatment, including the selection of the proposed color(s) and finishes;

b) A list of each major project structure, building, tank, pipe, and wall; the transmission line towers and/or poles; and fencing, specifying the color(s) and finish proposed for each. Colors must be identified by vendor, name, and number; or according to a universal designation system;

c) One set of color brochures or color chips showing each proposed color and finish;

d) One set of 11” x 17” color photo simulations at life size scale, of the treatment proposed for use on project structures, including structures treated during manufacture, from Key Observation Points 2 and 5 (locations shown on Visual Resources Figure ~~1~~ **3** of the Staff Assessment);

e) A specific schedule for completion of the treatment; and

f) A procedure to ensure proper treatment maintenance for the life of the project.

The project owner shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated in the field, until the project

owner receives notification of approval of the treatment plan by the CPM. Subsequent modifications to the treatment plan are prohibited without CPM approval.

At least 90 days prior to specifying to the vendor the colors and finishes of the first structures or buildings that are surface treated during manufacture, the project owner shall submit the proposed treatment plan to the CPM for review and approval and simultaneously to the City of Carlsbad for review and comment.

If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a plan with the specified revision(s) for review and approval by the CPM before any treatment is applied. Any modifications to the treatment plan must be submitted to the CPM for review and approval.

Prior to the start of commercial operation, the project owner shall notify the CPM that surface treatment of all listed structures and buildings has been completed and they are ready for inspection and shall submit one set of electronic color photographs from the same key observation points identified in (d) above.

The project owner shall provide a status report regarding surface treatment maintenance in the Annual Compliance Report. The report shall specify a): the condition of the surfaces of all structures and buildings at the end of the reporting year; b) maintenance activities that occurred during the reporting year; and c) the schedule of maintenance activities for the next year.

Additional Perimeter Landscape Screening

VIS-2 The project owner shall provide **perimeter** landscaping that reduces the visibility of the power plant structures in accordance with local policies and ordinances ~~and with findings and recommendations of Applicant Data Responses DR70-1, and DR106 and DR107~~. Trees and other vegetation consisting of informal groupings of tall, fast-growing evergreen shrubs and trees shall be strategically placed along the eastern, western, and northern facility boundaries ~~as called for in the above-referenced data responses~~, consistent with transmission line safety requirements. The objective shall be to create landscape screening of sufficient density and height to screen the power plant structures to the greatest feasible extent in the shortest feasible time; and to provide timely replacement for aging or diseased tree specimens on site in order to avoid future loss of existing visual screening. The design approach shall include both fast-growing tall shrubs to provide quick screening, and tall evergreen trees similar to those existing on site, to provide an ultimate overall canopy height comparable to that existing atop the CECP site earth berms. **In order to compensate for recent tree losses in the berm along the I-5 frontage and enhance perimeter screening in the earliest feasible time-frame, implementation of VIS-2 shall begin at the earliest feasible time, in conjunction with Phase I construction. Also, in anticipation of future I-5 widening, planting under VIS-2 shall include**

supplemental tall tree planting in available areas outside of the anticipated I-5 right-of-way.

In addition, the project owner shall, in coordination with the city of Carlsbad, prepare and submit supplemental, modified landscape plans to provide for replacement tree planting as needed, to the greatest feasible extent, in the future event of loss of existing tree screening due to city of Carlsbad sewer and/or lift station projects. Such supplemental landscape plans shall also provide the plan components described in items a through d, below, and be subject to the same verification procedures.

The project owner shall submit to the CPM for review and approval, and simultaneously to the city of Carlsbad for review and comment, a landscaping plan whose proper implementation will satisfy these requirements. The plan shall include:

a) A detailed landscape, grading, and irrigation plan, at a reasonable scale. The plan shall demonstrate how the requirements stated above shall be met. The plan shall provide a detailed installation schedule demonstrating installation of as much of the landscaping as early in the construction process as is feasible in coordination with project construction.

b) A list (prepared by a qualified professional arborist familiar with local growing conditions) of proposed species, specifying installation sizes, growth rates, **suitable native and non-invasive plant species, and local availability of proposed species.** expected time to maturity, expected size at five years and at maturity, spacing, number, availability, and a discussion of the suitability of the plants for the site conditions and mitigation objectives, with the objective of providing the widest possible range of species from which to choose;

c)Maintenance procedures, including any needed irrigation and a plan for routine annual or semi-annual debris removal for the life of the project;

d) A procedure for monitoring for and replacement of unsuccessful plantings for the life of the project; and

e) One set of 11”x17” color photo-simulations of the proposed landscaping at five years and 20 years after planting, as viewed from adjoining segments of I-5.

The plan shall not be implemented until the project owner receives final approval from the CPM.

The landscaping plan shall be developed and submitted for review at the earliest feasible time during or prior to Phase I construction. The landscaping plan shall be submitted to the CPM for review and approval and

simultaneously to the city of Carlsbad for review and comment at least 90 days prior to installation.

If the CPM determines that the plan requires revision, the project owner shall provide to the CPM and simultaneously to the city of Carlsbad a revised plan for review and approval by the CPM.

The planting must occur during the first optimal planting season following site mobilization. The project owner shall simultaneously notify the CPM and the city of Carlsbad within seven days after completing installation of the landscaping, that the landscaping is ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead or dying vegetation, for the previous year of operation in each Annual Compliance Report. The city of Carlsbad, with the concurrence of the CPM, shall have authority to require replacement planting of dead or dying vegetation through the life of the project.

Landscape Screening of Construction Staging Sites ~~D and E~~

VIS-3 **The project owner shall provide a detailed plan of the northeast laydown area for review and approval. The project owner shall modify the footprint of the proposed northeast laydown site as needed to avoid perimeter berm or tree removal.** The project owner shall provide **supplemental** landscaping **during or prior to the construction phase** that reduces the visibility of construction staging activities, equipment and materials, **as needed.** ~~at proposed Staging Sites 'D' and 'E' of the EPS site (near fuel tanks #1 and #2) as seen from Carlsbad Boulevard and other public viewpoints, and that complies with local policies and ordinances~~. **Where supplemental or replacement planting is needed to provide screening of staging activities, t**~~T~~rees and other vegetation consisting of informal groupings of fast-growing evergreens shall be strategically placed along the northern, **eastern** and western boundaries of the staging sites, as appropriate, of sufficient density and height to provide the greatest feasible screening within the shortest feasible time. Planting of the landscape screening shall be implemented as soon after start of project construction as feasible, in order to maximize growing time and screening of staging activities during the construction period.

If necessary to provide visual screening of staging activities, equipment and materials in the short term, the project owner shall provide temporary dark-colored, opaque fencing to provide visual screening until landscape screening described above has achieved sufficient maturity to provide visual screening. **Existing opaque fencing shall be maintained along the Carlsbad Boulevard frontage of the EPS for the duration of construction and demolition.**

The project owner shall submit to the CPM for review and approval, and simultaneously to the city of Carlsbad for review and comment, a landscaping plan whose proper implementation will satisfy these requirements. The plan shall include:

a) A detailed landscape, grading, and irrigation plan, at a reasonable scale. The plan shall demonstrate how the requirements stated above shall be met. The plan shall provide a detailed installation schedule demonstrating installation of as much of the landscaping as early in the construction process as is feasible in coordination with project construction. **The intent of the plan shall be to minimize loss of existing perimeter tree and shrub screening, particularly at the northeast laydown site; and to provide supplemental and replacement plantings as needed to screen staging sites.**

b) A list (prepared by a qualified professional arborist familiar with local growing conditions) of proposed species, specifying installation sizes, growth rates, expected time to maturity, expected size at five years and at maturity, spacing, number, availability, and a discussion of the suitability of the plants for the site conditions and mitigation objectives, with the objective of providing the widest possible range of species from which to choose;

c) Maintenance procedures, including any needed irrigation and a plan for routine annual or semi-annual debris removal for the life of the project;

d) A procedure for monitoring for and replacement of unsuccessful plantings for the life of the project; and

e) One set of 11”x17” color photo-simulations of the proposed ~~landscaping~~ **landscape condition** at **start of construction and at** five years ~~and twenty years~~ after planting, as viewed from Key Observation Point ~~1~~ **6** (location shown on Visual Resources Figure 3 of the Staff Assessment).

The plan shall not be implemented until the project owner receives final approval from the CPM.

The landscaping plan shall be submitted to the CPM for review and approval, and simultaneously to the City of Carlsbad for review and comment, at least 90 days prior to ~~installation~~ **start of construction.**

If the CPM determines that the plan requires revision, the project owner shall provide to the CPM and simultaneously to the city of Carlsbad a revised plan for review and approval by the CPM.

The planting must occur during the first optimal planting season following site mobilization. The project owner shall simultaneously notify the CPM and the

city of Carlsbad within seven days after completing installation of the landscaping, that the landscaping is ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead or dying vegetation, for the previous year of operation in each Annual Compliance Report.

Temporary and Permanent Exterior Lighting

VIS-4 To the extent feasible, consistent with safety and security considerations, the project owner shall design and install all permanent exterior lighting such that a) lamps and reflectors are not visible from beyond the project site, including any off-site security buffer areas; b) lighting does not cause excessive reflected glare; c) direct lighting does not illuminate the nighttime sky; d) illumination of the project and its immediate vicinity is minimized, and e) the ~~plan~~ **lighting** complies with local policies and ordinances.

The project owner shall submit to the CPM for review and approval, and simultaneously to the city of Carlsbad for review and comment, a lighting mitigation plan that includes the following:

a) Location and direction of light fixtures shall take the lighting mitigation requirements into account;

b) Lighting design shall consider setbacks of project features from the site boundary to aid in satisfying the lighting mitigation requirements;

c) Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated;

d) Light fixtures that are visible from beyond the project boundary shall have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the project boundary, except where necessary for security;

e) All lighting shall be of minimum necessary brightness consistent with operational safety and security; and

f) Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied.

g) In order to conform with Condition of Certification **BIO-7**, FAA-required exhaust stack lighting shall be white strobe-type lighting.

At least 90 days prior to ordering any permanent exterior lighting, the project owner shall contact the CPM to discuss the documentation required in the lighting mitigation plan.

At least 60 days prior to ordering any permanent exterior lighting, the project owner shall submit to the CPM for review and approval, and simultaneously to the city of Carlsbad for review and comment, a lighting mitigation plan.

If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a revised plan for review and approval by the CPM.

The project owner shall not order any exterior lighting until receiving CPM approval of the lighting mitigation plan.

Prior to commercial operation, the project owner shall notify the CPM that the lighting has been completed and is ready for inspection. If after inspection the CPM notifies the project owner that modifications to the lighting are needed, within 30 days of receiving that notification the project owner shall implement the modifications and notify the CPM that the modifications have been completed and are ready for inspection.

Within 48 hours of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form report as specified in the **Compliance Conditions** including a proposal to resolve the complaint, and a schedule for implementation. The project owner shall notify the CPM within 48 hours after completing implementation of the proposal. A copy of the complaint resolution form report shall be submitted to the CPM within 30 days.

Cumulative Impact Buffer Zone, Coordination with Caltrans, and Mitigation Plan

VIS-5 In order to address potential cumulative visual impacts resulting from I-5 widening, the ~~applicant~~ **project owner** shall maintain a permanent buffer zone, including the existing vegetative visual screening, on the eastern portion of the CECP site, between the existing NRG fence line and storage tank perimeter road. This measure shall be coordinated with Conditions of Certification **LAND-1** and **HAZ- 8**, **requiring construction of a tall wall/safety barrier at the future right-of-way**. The existing landscape screening within the buffer zone shall be maintained and enhanced per Condition of Certification **VIS-2** after start of project construction. The buffer zone shall be kept available to maintain existing visual screening, accommodate future possible I-5 widening to the extent necessary, and to accommodate both future hazard protection features and visual screening.

In addition, the ~~applicant~~ **project owner** shall work with Caltrans to develop a mitigation plan for accommodating the widening project while maintaining visual screening of the CECP to acceptable levels **over the long term following I-5 widening**. This plan could include complete or partial avoidance of the CECP site, complete or partial berm retention or replacement, complete or partial retention of existing landscape screening,

and replacement screening as needed. The objective of the plan shall be to accommodate the I-5 widening within the designated buffer zone to the extent that encroachment is unavoidable, while providing needed hazard protection and acceptable levels of visual screening of the power plant.

The mitigation plan shall include a ~~, at a minimum, a 20-foot-wide or greater~~ landscape planting buffer zone along the entire CECP/I-5 boundary, to accommodate replacement tree canopy of sufficient height and density and to provide substantial visual screening of the tall amended CECP features, including exhaust stacks and transmission poles; and to substantially replace any existing tree canopy on the eastern CECP boundary lost to highway expansion. The landscape buffer may occupy portions of the CECP site, the Caltrans right-of-way, or both. Wherever feasible, the landscape buffer shall maintain a minimum 20 foot width. Where infeasible, exceptions shall be approved by the CPM. The solution developed under Condition of Certification VIS-5 shall not preclude relocation or undergrounding of transmission poles or other features, if necessary to provide the stipulated visual buffer or achieve adequate long-term project screening.

~~If construction of a new landscaped berm west of the existing berm and proposed future Caltrans right-of-way is determined to be the most feasible measure to address potential cumulative impacts of the I-5 Widening Project, then design and construction of the new berm shall be implemented at the earliest feasible time, and no later than start of project operation, in order to maximize growing time for trees planted on the new berm.~~ Landscaping of **the buffer zone** ~~a replacement berm~~ shall include installation of large-container (24-inch box or larger, as needed), fast-growing evergreen trees in sufficient density to provide comparable or better visual screening of the CECP site than currently exists, within the shortest feasible period. Trees shall be selected and located so as to achieve substantial screening within a period of five years from ~~start of project operation~~ **the time of planting.**

The plan shall, at a minimum, include the following components:

a) a record of discussions, meetings and planning activities conducted with Caltrans;

b) the conclusions of these coordination activities;

c) a detailed Mitigation Plan providing plans, elevations, cross-sections or other details, including a detailed list of plants and container size, sufficient to fully convey how the objectives of effective visual screening of the CECP are to be achieved. **To the extent possible, the plans shall comply with the city of Carlsbad Landscape Manual as applicable. The plan shall specifically address visual design of security barriers required under Condition of Certification HAZ-8 to ensure their aesthetic quality and compatibility. To the extent feasible, the plans shall conform to the**

intent of the Caltrans Design Guidelines for the I-5 NCC Project, Coastal Mesa Theme Unit (Caltrans 2013).

d) A proposed construction schedule.

Verification: At the earliest feasible time, ~~applicant~~ **the project owner** shall coordinate with Caltrans to discuss specific hazard and visual mitigation strategies. ~~Following publication of the I-5 Widening DEIS, applicant~~ **the project owner** shall work with Caltrans to devise a specific Cumulative Impact Mitigation Plan for accommodating hazard protection and visual screening, **to be implemented at the time of I-5 widening**.

Following coordination and plan development with Caltrans, the project owner shall submit a draft of the Cumulative Impact Mitigation Plan to the cty of Carlsbad for review and comment, and to the CPM for review and approval, **at least 180 days prior to completion by Caltrans of I-5 widening in the area of the CECP boundary**. The project owner shall submit any required revisions within 30 days of notification by the CPM. The project owner shall not implement the plan until receiving approval from the CPM. After receiving approval, the project owner shall complete implementation of the mitigation plan at the earliest feasible opportunity, but not later than 180 days after plan approval. The project owner shall notify the CPM within seven days after implementing the approved plan that the plan is ready for inspection~~. Planting must be completed and approved by the CPM prior to start of project operation.~~

FACILITY DESIGN

Following are the existing conditions of certification applicable to the amended CECP with the following revisions. The compliance requirements for facility design designated Conditions of Certification **GEN-1** through **GEN-8**, **CIVIL-1** through **CIVIL-4**, **STRUC-1** through **STRUC-4**, **MECH-1** through **MECH-3**, and **ELEC-1** have been revised accordingly. These revisions include the following.

- The applicable version and section references of the CBSC have been updated.
- Condition of Certification **GEN-1** has been updated to require that the demolition of ASTs 1, 2, and 4 and the demolition of the EPS be subject to the CBO's approval, in compliance with the CBC.
- Condition of Certification **GEN-2** has been updated to reflect the equipment proposed for the amended CECP as specified in **GEN-2**, **Table 1**: **Major Structures and Equipment List**.
- The building code requires that the minimum electrical load for electrical equipment and systems requiring CBO review and inspection be 120 volts, not 480 volts as currently stated in Condition of Certification **ELEC-1**; **ELEC-1** has been revised accordingly.

The added text is identified as **bold** and **underlined**, and the deleted text is identified as ~~strikethrough~~.

GEN-1 The project owner shall design, construct, and inspect the project in accordance with the **2013**~~2007~~ California Building Standards Code (CBSC), also known as Title 24, California Code of Regulations, which encompasses the California Building Code (CBC), California Administrative Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Fire Code, California Code for Building Conservation, California Reference Standards Code, and all other applicable engineering laws, ordinances, regulations and standards (LORS) in effect at the time initial design plans are submitted to the chief building official (CBO) for review and approval (the CBSC in effect is the edition that has been adopted by the California Building Standards Commission and published at least 180 days previously). The project owner shall ensure that all the provisions of the above applicable codes are enforced during the construction, addition, alteration, moving, demolition, repair, or maintenance of the completed facility**, including the demolition of above-ground fuel oil storage tanks 1, 2, and 4 (ASTs 1, 2, and 4), and the demolition of the Encina Power Station (EPS)** (**2013**~~2007~~ CBC, Appendix Chapter 1, § **1.1.3**~~101.2~~, Scope). All transmission facilities (lines, switchyards, switching stations and substations) are covered in the conditions of certification in the **Transmission System Engineering** section of this document.

In the event that the initial engineering designs are submitted to the CBO when the successor to the **2013**~~2007~~ CBSC is in effect, the **2013**~~2007~~ CBSC provisions shall be replaced with the applicable successor provisions. Where, in any specific case, different sections of the code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

The project owner shall ensure that all contracts with contractors, subcontractors, and suppliers clearly specify that all work performed and materials supplied comply with the codes listed above.

Verification: **At least 30 days prior to the demolition of ASTs 1, 2, and 4, the project owner shall contact the CBO to obtain the CBO's approval of the work. At least five days prior to the start of this demolition, the project owner shall notify the CPM of the CBO's approval of this work.**

At least 30 days prior to the demolition of the EPS, the project owner shall contact the CBO to obtain the CBO's approval of the work. At least five days prior to the start of this demolition, the project owner shall notify the CPM of the CBO's approval of this work.

Within 30 days following receipt of the certificate of occupancy, the project owner shall submit to the compliance project manager (CPM) a statement of verification, signed by

the responsible design engineer, attesting that all designs, construction, installation, and inspection requirements of the applicable LORS and the Energy Commission's decision have been met in the area of facility design. The project owner shall provide the CPM a copy of the certificate of occupancy within 30 days of receipt from the CBO (**2013**~~2007~~ CBC, Appendix Chapter 1, § **111**~~110~~, Certificate of Occupancy).

Once the certificate of occupancy has been issued, the project owner shall inform the CPM at least 30 days prior to any construction, addition, alteration, moving, demolition, repair, or maintenance to be performed on any portion(s) of the completed facility that requires CBO approval for compliance with the above codes. The CPM will then determine if the CBO needs to approve the work.

GEN-2 Before submitting the initial engineering designs for CBO review, the project owner shall furnish the CPM and the CBO with a schedule of facility design submittals, master drawing and master specifications lists. The schedule shall contain a list of proposed submittal packages of designs, calculations, and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the project owner shall provide specific packages to the CPM upon request.

Verification: At least 60 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO and to the CPM the schedule, the master drawing and master specifications lists of documents to be submitted to the CBO for review and approval. These documents shall be the pertinent design documents for the major structures and equipment listed in **Facility Design Table 2,** below. Major structures and equipment shall be added to or deleted from the table only with CPM approval. The project owner shall provide schedule updates in the monthly compliance report.

Facility Design Table 2
Major Structures and Equipment List

Equipment/System	Quantity (Plant)
Combustion Gas Turbine (CGT) Foundation and Connections	6
Selective Catalytic Reduction Stack Foundations and Connections	6
CGT Generator Foundations and Connections	6
CGT Transformer Foundations and Connections	6
Auxiliary Transformer Foundations and Connections	6
Generator Circuit Breaker Foundations and Connections	6
Fin Fan Cooler Foundations and Connections	6
Balance of Plant PDC	1
CGT Lube Oil Cooler Foundations and Connections	2
CGT Inlet Filter Foundations and Connections	2
Air Compressor Building Structure, Foundations and Connections	1
Fuel Gas Compressors Building Structure, Foundations and Connections	1

Equipment/System	Quantity (Plant)
Water Treatment Trailer Foundations and Connections	1
Continuous Emissions Monitoring System Foundations and Connections	3
Shell and Tube Heat Exchanger Foundations and Connections	6
Auxiliary Skid Foundations and Connections	6
Attemporation Blower Skid Foundations and Connections	6
CGT and Intercooler MCC	6
Warehouse and Maintenance Building Structure, Foundations and Connections	1
Control Room and Administration Building Structure, Foundations and Connections	1
Emergency Diesel Generator Foundations and Connections	1
Storage Tanks Structure, Foundations and Connections	4
Fuel Gas Metering Foundations and Connections	1
Ammonia Prep Foundations and Connections	1
Raw/Fire Water Tank Foundation and Connections	1
Demineralized Water Storage Tank Foundation and Connections	1
Fire Water Pumps Building Foundations and Connections	1
Crane Maintenance Pad Foundations and Connections	2

Facility Design Table 2
Major Structures and Equipment List

Equipment/System	Quantity (Plant)
Combustion Gas Turbine (CGT) Foundation and Connections	2
Heat Recovery Steam Generator (HRSG) Foundation and Connections	2
HRSG Stack Foundations and Connections	2
Steam Turbine (ST) Foundations and Connections	2
CGT Generator Foundations and Connections	2
ST Generator Foundations and Connections	2
CGT Generator Transformer Foundations and Connections	2
ST Generator Transformer Foundations and Connections	2
Auxiliary Transformer Foundations and Connections	2
Generator Circuit Breaker Foundations and Connections	2
Electrical Package Foundations and Connections	2
Medium Voltage Switchgear Foundations and Connections	2
ST Fin Fan Cooler Foundations and Connections	2
Rotor Air Fin Fan Cooler Foundations and Connections	2
Condensate Polishing Fin Fan Cooler Foundations and Connections	2
ST Lube Oil Cooler Foundations and Connections	2
CGT Lube Oil Cooler Foundations and Connections	2
CGT Inlet Filter Foundations and Connections	2
Air Compressor Foundations and Connections	2
Fuel Gas Compressors Enclosure Foundations and Connections	1
Fuel Gas Conditioner/Meter Foundations and Connections	1
Selective Catalytic Reduction Skid Foundations and Connections	2
Balance of Plant Power Control Center Foundations and Connections	2
Steam Turbine Power Control Center Foundations and Connections	2
Continuous Emissions Monitoring System Foundations and Connections	2
Ammonia Storage Foundations and Connections	2
Chemical Dosing Equipment Foundations and Connections	2
Oil/Water Separator Foundations and Connections	2
Boiler Feedwater Pump Foundation and Connections	2
Boiler Blowdown Tank Foundations and Connections	2
Gland Steam Condenser Foundations and Connections	2
Raw/Reclaimed Water Tank Foundation and Connections	1
Demineralized Water Storage Tank Foundation and Connections	1
Fire Water Tank Foundation and Connections	1
Raw Water Forwarding Pumps Foundations and Connections	1
Demineralized Water Forwarding Pumps Foundations and Connections	1
Fire Water Pumps Enclosure Foundations and Connections	1

~~Equipment/System~~	~~Quantity (Plant)~~
~~Deaerator/Drain Tanks/ Condensate Pumps Foundations and Connections~~	~~2~~
~~Reverse Osmosis Drain Foundations and Connections~~	~~1~~
~~Crane Maintenance Pad Foundations and Connections~~	~~2~~

GEN-3 The project owner shall make payments to the CBO for design review, plan checks, and construction inspections, based upon a reasonable fee schedule to be negotiated between the project owner and the CBO. These fees may be consistent with the fees listed in the **2013**~~2007~~ CBC (**2013**~~2007~~ CBC, **Appendix Chapter 1, § 109, Fees** ~~Appendix Chapter 1, § 108, Fees; Chapter 1, § 108.4, Permits, Fees, Applications and Inspections~~), adjusted for inflation and other appropriate adjustments; may be based on the value of the facilities reviewed; may be based on hourly rates; or may be otherwise agreed upon by the project owner and the CBO.

Verification: The project owner shall make the required payments to the CBO in accordance with the agreement between the project owner and the CBO. The project owner shall send a copy of the CBO's receipt of payment to the CPM in the next monthly compliance report indicating that applicable fees have been paid.

GEN-4 Prior to the start of rough grading, the project owner shall assign a California-registered architect, structural engineer, or civil engineer, as the resident engineer in charge of the project (**2013**~~2007~~ California Administrative Code, § 4-209, Designation of Responsibilities). All transmission facilities (lines, switchyards, switching stations, and substations) are addressed in the conditions of certification in the **Transmission System Engineering** section of this document.

The resident engineer may delegate responsibility for portions of the project to other registered engineers. Registered mechanical and electrical engineers may be delegated responsibility for mechanical and electrical portions of the project, respectively. A project may be divided into parts, provided that each part is clearly defined as a distinct unit. Separate assignments of general responsibility may be made for each designated part.

The resident engineer shall:

1. Monitor progress of construction work requiring CBO design review and inspection to ensure compliance with LORS;

2. Ensure that construction of all facilities subject to CBO design review and inspection conforms in every material respect to applicable LORS, these conditions of certification, approved plans, and specifications;

3. Prepare documents to initiate changes in approved drawings and specifications when either directed by the project owner or as required by the conditions of the project;

4. Be responsible for providing project inspectors and testing agencies with complete and up-to-date sets of stamped drawings, plans, specifications, and any other required documents;

5. Be responsible for the timely submittal of construction progress reports to the CBO from the project inspectors, the contractor, and other engineers who have been delegated responsibility for portions of the project; and

6. Be responsible for notifying the CBO of corrective action or the disposition of items noted on laboratory reports or other tests when they do not conform to approved plans and specifications.

The resident engineer shall have the authority to halt construction and to require changes or remedial work if the work does not meet requirements.

If the resident engineer or the delegated engineers are reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer.

Verification: At least 30 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the resume and registration number of the resident engineer and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the resident engineer and other delegated engineer(s) within five days of the approval.

If the resident engineer or the delegated engineer(s) is subsequently reassigned or replaced, the project owner has five days to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.

GEN-5 Prior to the start of rough grading, the project owner shall assign at least one of each of the following California registered engineers to the project: a civil engineer; a soils, geotechnical, or civil engineer experienced and knowledgeable in the practice of soils engineering; and an engineering geologist. Prior to the start of construction, the project owner shall assign at least one of each of the following California registered engineers to the project: a design engineer who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; a mechanical engineer; and an electrical engineer. (California Business and Professions Code section 6704 et seq., and sections 6730, 6731 and 6736 require state registration to practice as a civil engineer or structural engineer in California) All transmission facilities (lines, switchyards, switching stations, and substations) are handled in the

conditions of certification in the **Transmission System Engineering** section of this document.

The tasks performed by the civil, mechanical, electrical, or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (for example, proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer.

The project owner shall submit, to the CBO for review and approval, the names, qualifications, and registration numbers of all responsible engineers assigned to the project (**2013**~~2007~~ CBC, Appendix Chapter 1, § 104, Duties and Powers of Building Official).

If any one of the designated responsible engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned responsible engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer.

A. The civil engineer shall:

   1. Review the foundation investigations, geotechnical, or soils reports prepared by the soils engineer, the geotechnical engineer, or by a civil engineer experienced and knowledgeable in the practice of soils engineering;

   2. Design (or be responsible for the design of), stamp, and sign all plans, calculations, and specifications for proposed site work, civil works, and related facilities requiring design review and inspection by the CBO. At a minimum, these include: grading; site preparation; excavation; compaction; and construction of secondary containment, foundations, erosion and sedimentation control structures, drainage facilities, underground utilities, culverts, site access roads and sanitary sewer systems; and

   3. Provide consultation to the resident engineer during the construction phase of the project and recommend changes in the design of the civil works facilities and changes to the construction procedures.

B. The soils engineer, geotechnical engineer, or civil engineer experienced and knowledgeable in the practice of soils engineering, shall:

   1. Review all the engineering geology reports;

   2. Prepare the foundation investigations, geotechnical, or soils reports containing field exploration reports, laboratory tests, and engineering

analysis detailing the nature and extent of the soils that could be susceptible to liquefaction, rapid settlement or collapse when saturated under load (**2013**~~2007~~ CBC, **Chapter 18, § 1803, Soils Engineering Report** ~~Appendix J, § J104.3, Soils Report; 1802.2, Foundation and Soils Investigations~~)

3. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with requirements set forth in the **2013**~~2007~~ CBC, **Chapter 17, § 1704, Special Inspection** ~~Appendix J, section J105, Inspections, and the **2013**2007 California Administrative Code, section 4-211, Observation and Inspection of Construction~~ (depending on the site conditions, this may be the responsibility of either the soils engineer, the engineering geologist, or both); and

4. Recommend field changes to the civil engineer and resident engineer.

This engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform to the predicted conditions used as the basis for design of earthwork or foundations (**2013**~~2007~~ CBC, Appendix Chapter 1, § **115**~~114~~, Stop **Work** Orders).

C. The engineering geologist shall:

1. Review all the engineering geology reports and prepare a final soils grading report; and

2. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with the requirements set forth in the **2013**~~2007~~ California Administrative Code, § 4-211, Observation and Inspection of Construction (depending on the site conditions, this may be the responsibility of either the soils engineer, the engineering geologist, or both).

D. The design engineer shall:

1. Be directly responsible for the design of the proposed structures and equipment supports;

2. Provide consultation to the resident engineer during design and construction of the project;

3. Monitor construction progress to ensure compliance with engineering LORS;

4. Evaluate and recommend necessary changes in design; and

5. Prepare and sign all major building plans, specifications, and calculations.

E. The mechanical engineer shall be responsible for, and sign and stamp a statement with, each mechanical submittal to the CBO, stating that the proposed final design plans, specifications, and calculations conform to all of the mechanical engineering design requirements set forth in the Energy Commission's decision.

F. The electrical engineer shall:

1. Be responsible for the electrical design of the project; and

2. Sign and stamp electrical design drawings, plans, specifications, and calculations.

Verification: At least 30 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, resumes and registration numbers of the responsible civil engineer, soils (geotechnical) engineer and engineering geologist assigned to the project.

At least 30 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of construction, the project owner shall submit to the CBO for review and approval, resumes and registration numbers of the responsible design engineer, mechanical engineer, and electrical engineer assigned to the project.

The project owner shall notify the CPM of the CBO's approvals of the responsible engineers within five days of the approval.

If the designated responsible engineer is subsequently reassigned or replaced, the project owner has five days in which to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.

GEN-6 Prior to the start of an activity requiring special inspection, the project owner shall assign to the project qualified and certified special inspector(s) who shall be responsible for the special inspections required by the **2013**~~2007~~ CBC, Chapter 17, § 1704; Special Inspections, Chapter 17A, § 1704A, Special Inspections; and Appendix Chapter 1, § **110**~~109~~, Inspections. All transmission facilities (lines, switchyards, switching stations, and substations) are handled in conditions of certification in the **Transmission System Engineering** section of this document.

A certified weld inspector, certified by the American Welding Society (AWS), and/or American Society of Mechanical Engineers (ASME) as applicable, shall inspect welding performed on site requiring special inspection (including structural, piping, tanks and pressure vessels).

The special inspector shall:

1. Be a qualified person who shall demonstrate competence, to the satisfaction of the CBO, for inspection of the particular type of construction requiring special or continuous inspection;

2. Observe the work assigned for conformance with the approved design drawings and specifications;

3. Furnish inspection reports to the CBO and resident engineer. All discrepancies shall be brought to the immediate attention of the resident engineer for correction, then, if uncorrected, to the CBO and the CPM for corrective action [**2013**~~2007~~ CBC, Chapter 17, Section 1704.**2.4**~~1.2~~, Report Requirements]; and

4. Submit a final signed report to the resident engineer, CBO, and CPM, stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans, specifications, and other provisions of the applicable edition of the CBC.

Verification: At least 15 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of an activity requiring special inspection, the project owner shall submit to the CBO for review and approval, with a copy to the CPM, the name(s) and qualifications of the certified weld inspector(s) or other certified special inspector(s) assigned to the project to perform one or more of the duties set forth above. The project owner shall also submit to the CPM a copy of the CBO's approval of the qualifications of all special inspectors in the next monthly compliance report.

If the special inspector is subsequently reassigned or replaced, the project owner has five days in which to submit the name and qualifications of the newly assigned special inspector to the CBO for approval. The project owner shall notify the CPM of the CBO's approval of the newly assigned inspector within five days of the approval.

GEN-7 If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend required corrective actions (**2013**~~2007~~ CBC, ~~Appendix Chapter 1, § 109.6, Approval Required;~~ Chapter 17, § 1704.**2.4**~~1.2~~, Report Requirements). The discrepancy documentation shall be submitted to the CBO for review and approval. The discrepancy documentation shall reference this condition of certification and, if appropriate, applicable sections of the CBC and/or other LORS.

Verification: The project owner shall transmit a copy of the CBO's approval of any corrective action taken to resolve a discrepancy to the CPM in the next monthly compliance report. If any corrective action is disapproved, the project owner shall advise the CPM, within five days, of the reason for disapproval and the revised corrective action to obtain CBO's approval.

GEN-8 The project owner shall obtain the CBO's final approval of all completed work that has undergone CBO design review and approval. The project owner shall

request the CBO to inspect the completed structure and review the submitted documents. The project owner shall notify the CPM after obtaining the CBO's final approval. The project owner shall retain one set of approved engineering plans, specifications, and calculations (including all approved changes) at the project site or at an alternative site approved by the CPM during the operating life of the project (**2013**~~2007~~ CBC, Appendix Chapter 1, § **110**~~106.3.1~~, **Inspections** ~~Approval of Construction Documents~~). Electronic copies of the approved plans, specifications, calculations, and marked-up as-builts shall be provided to the CBO for retention by the CPM.

Verification: Within 15 days of the completion of any work, the project owner shall submit to the CBO, with a copy to the CPM, in the next monthly compliance report, (a) a written notice that the completed work is ready for final inspection, and (b) a signed statement that the work conforms to the final approved plans. After storing the final approved engineering plans, specifications, and calculations described above, the project owner shall submit to the CPM a letter stating both that the above documents have been stored and the storage location of those documents.

Within 90 days of the completion of construction, the project owner shall provide to the CBO three sets of electronic copies of the above documents at the project owner's expense. These are to be provided in the form of "read only" files (Adobe .pdf 6.0), with restricted (password-protected) printing privileges, on archive quality compact discs.

CIVIL-1 The project owner shall submit to the CBO for review and approval the following:

1. Design of the proposed drainage structures and the grading plan;

2. An erosion and sedimentation control plan;

3. Related calculations and specifications, signed and stamped by the responsible civil engineer; and

4. Soils, geotechnical, or foundation investigations reports required by the **2013**~~2007~~ CBC, **Chapter 18, § 1803.6 Reporting, and § 1803, Geotechnical Investigation** ~~Appendix J, section J104.3, Soils Report; and Chapter 18, section 1802.2, Foundation and Soils Investigation~~.

Verification: At least 15 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of site grading the project owner shall submit the documents described above to the CBO for design review and approval. In the next monthly compliance report following the CBO's approval, the project owner shall submit a written statement certifying that the documents have been approved by the CBO.

CIVIL-2 The resident engineer shall, if appropriate, stop all earthwork and construction in the affected areas when the responsible soils engineer, geotechnical engineer, or the civil engineer experienced and knowledgeable in the practice of soils engineering identifies unforeseen adverse soil or geologic conditions. The project owner shall submit modified plans, specifications, and

calculations to the CBO based on these new conditions. The project owner shall obtain approval from the CBO before resuming earthwork and construction in the affected area (**2013**~~2007~~ CBC, § **115**~~114~~, Stop **Work** Orders).

Verification: The project owner shall notify the CPM within 24 hours when earthwork and construction is stopped as a result of unforeseen adverse geologic/soil conditions. Within 24 hours of the CBO's approval to resume earthwork and construction in the affected areas, the project owner shall provide to the CPM a copy of the CBO's approval.

CIVIL-3 The project owner shall perform inspections in accordance with the **2013**~~2007~~ CBC, Appendix Chapter 1, § **110**~~109~~, Inspections; and Chapter 17, § 1704, Special Inspections. All plant site-grading operations, for which a grading permit is required, shall be subject to inspection by the CBO.

If, in the course of inspection, it is discovered that the work is not being performed in accordance with the approved plans, the discrepancies shall be reported immediately to the resident engineer, the CBO, and the CPM (**2013**~~2007~~ CBC, Chapter 17, § 1704.**2.4**~~1.2~~, Report Requirements). The project owner shall prepare a written report, with copies to the CBO and the CPM, detailing all discrepancies, non-compliance items, and the proposed corrective action.

Verification: Within five days of the discovery of any discrepancies, the resident engineer shall transmit to the CBO and the CPM a non-conformance report (NCR), and the proposed corrective action for review and approval. Within five days of resolution of the NCR, the project owner shall submit the details of the corrective action to the CBO and the CPM. A list of NCRs, for the reporting month, shall also be included in the following monthly compliance report.

CIVIL-4 After completion of finished grading and erosion and sedimentation control and drainage work, the project owner shall obtain the CBO's approval of the final grading plans (including final changes) for the erosion and sedimentation control work. The civil engineer shall state that the work within his/her area of responsibility was done in accordance with the final approved plans (**2013**~~2007~~ CBC, Chapter 17, §1703.2, Written Approval).

Verification: Within 30 days (or project owner- and CBO-approved alternative time frame) of the completion of the erosion and sediment control mitigation and drainage work, the project owner shall submit to the CBO, for review and approval, the final grading plans (including final changes) and the responsible civil engineer's signed statement that the installation of the facilities and all erosion control measures were completed in accordance with the final approved combined grading plans, and that the facilities are adequate for their intended purposes, along with a copy of the transmittal letter to the CPM. The project owner shall submit a copy of the CBO's approval to the CPM in the next monthly compliance report.

STRUC-1 Prior to the start of any increment of construction of any major structure or component listed in **Facility Design Table 2** of Condition of Certification **GEN 2**, above, the project owner shall submit to the CBO for design review and approval the proposed lateral force procedures for project structures and the applicable designs, plans and drawings for project structures. Proposed lateral force procedures, designs, plans and drawings shall be those for the following items (from **Table 2**, above):

1. Major project structures;

2. Major foundations, equipment supports, and anchorage; and

3. Large field-fabricated tanks.

Construction of any structure or component shall not begin until the CBO has approved the lateral force procedures to be employed in designing that structure or component.

The project owner shall:

1. Obtain approval from the CBO of lateral force procedures proposed for project structures;

2. Obtain approval from the CBO for the final design plans, specifications, calculations, soils reports, and applicable quality control procedures. If there are conflicting requirements, the more stringent shall govern (for example, highest loads, or lowest allowable stresses shall govern). All plans, calculations, and specifications for foundations that support structures shall be filed concurrently with the structure plans, calculations, and specifications (**2013**~~2007~~ CBC, Appendix Chapter 1, §**104.1, Duties and Powers of Building Official, 105, Permits**~~109.6, Approval Required~~);

3. Submit to the CBO the required number of copies of the structural plans, specifications, calculations, and other required documents of the designated major structures prior to the start of on-site fabrication and installation of each structure, equipment support, or foundation (**2013 CBC, Appendix Chapter 1, § 107.5 Retention of Construction Documents**~~2007 California Administrative Code, § 4-210, Plans, Specifications, Computations and Other Data~~);

4. Ensure that the final plans, calculations, and specifications clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. The final designs, plans, calculations, and specifications shall be signed and stamped by the responsible design engineer (**2013**~~2007~~ CBC, Appendix Chapter 1, §**107.3.4** ~~106.3.4~~, Design Professional in Responsible Charge); and

5. Submit to the CBO the responsible design engineer's signed statement that the final design plans conform to applicable LORS (**2013**~~2007~~ CBC, Appendix Chapter 1, § **107.3.4** ~~106.3.4~~, Design Professional in Responsible Charge).

Verification: At least 60 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of any increment of construction of any structure or component listed in **Facility Design Table 2** of Condition of Certification **GEN-2**, above, the project owner shall submit to the CBO the above final design plans, specifications and calculations, with a copy of the transmittal letter to the CPM.

The project owner shall submit to the CPM, in the next monthly compliance report, a copy of a statement from the CBO that the proposed structural plans, specifications, and calculations have been approved and comply with the requirements set forth in applicable engineering LORS.

STRUC-2 The project owner shall submit to the CBO the required number of sets of the following documents related to work that has undergone CBO design review and approval:

1. Concrete cylinder strength test reports (including date of testing, date sample taken, design concrete strength, tested cylinder strength, age of test, type and size of sample, location and quantity of concrete placement from which sample was taken, and mix design designation and parameters);

2. Concrete pour sign-off sheets;

3. Bolt torque inspection reports (including location of test, date, bolt size, and recorded torques);

4. Field weld inspection reports (including type of weld, location of weld, inspection of non-destructive testing procedure and results, welder qualifications, certifications, qualified procedure description or number (ref: AWS); and

5. Reports covering other structural activities requiring special inspections shall be in accordance with the **2013**~~2007~~ CBC, Chapter 17, § 1704, Special Inspections~~,~~ and ~~§ 1709.1,~~ Structural Observations.

Verification: If a discrepancy is discovered in any of the above data, the project owner shall, within five days, prepare and submit an NCR describing the nature of the discrepancies and the proposed corrective action to the CBO, with a copy of the transmittal letter to the CPM (**2013**~~2007~~ CBC, Chapter 17, § 1704.**2.4**~~1.2~~, Report Requirements). The NCR shall reference the condition(s) of certification and the applicable CBC chapter and section. Within five days of resolution of the NCR, the project owner shall submit a copy of the corrective action to the CBO and the CPM.

The project owner shall transmit a copy of the CBO's approval or disapproval of the corrective action to the CPM within 15 days. If disapproved, the project owner shall advise the CPM, within five days, the reason for disapproval, and the revised corrective action necessary to obtain the CBO's approval.

STRUC-3 The project owner shall submit to the CBO design changes to the final plans required by the **2013**~~2007~~ CBC, including the revised drawings, specifications, calculations, and a complete description of, and supporting rationale for, the proposed changes, and shall give to the CBO prior notice of the intended filing (**2013**~~2007~~ CBC, Appendix Chapter 1, § **107**~~106.1~~, Submittal Documents;~~, §106.4, Amended Construction Documents;~~ **2013**~~2007~~ California Administrative Code, § 4-215, Changes in Approved Drawings and Specifications).

Verification: On a schedule suitable to the CBO, the project owner shall notify the CBO of the intended filing of design changes and shall submit the required number of sets of revised drawings and the required number of copies of the other above-mentioned documents to the CBO, with a copy of the transmittal letter to the CPM. The project owner shall notify the CPM, via the monthly compliance report, when the CBO has approved the revised plans.

STRUC-4 Tanks and vessels containing quantities of toxic or hazardous materials exceeding amounts specified in the **2013**~~2007~~ CBC~~, Chapter 3, Table 307.1(2),~~ shall, at a minimum, be designed to comply with **H-2 Occupancy Category of the 2013 CBC** ~~the requirements of that chapter~~.

Verification: At least 30 days (or within a project owner- and CBO-approved alternate time frame) prior to the start of installation of the tanks or vessels containing the above specified quantities of toxic or hazardous materials, the project owner shall submit to the CBO for design review and approval final design plans, specifications, and calculations, including a copy of the signed and stamped engineer's certification.

The project owner shall send copies of the CBO approvals of plan checks to the CPM in the following monthly compliance report. The project owner shall also transmit a copy of the CBO's inspection approvals to the CPM in the monthly compliance report following completion of any inspection.

MECH-1 The project owner shall submit, for CBO design review and approval, the proposed final design, specifications and calculations for each plant major piping and plumbing system listed in **Facility Design Table 2**, Condition of Certification **GEN-2**, above. Physical layout drawings and drawings not related to code compliance and life safety need not be submitted. The submittal shall also include the applicable **quality assurance and quality control** ~~QA/QC~~ procedures. Upon completion of construction of any such major piping or plumbing system, the project owner shall request the CBO's inspection approval of that construction (**2013**~~2007~~ CBC, Appendix Chapter 1, § **107**~~106.1~~, Submittal Documents; § **110**~~109.5~~, **Inspections** ~~Inspection~~

~~Requests~~; § **105, Permits**~~109.6, Approval Required~~; **2013**~~2007~~ California Plumbing Code, § **301**~~301.1.1~~, **Materials** ~~Approvals~~).

The responsible mechanical engineer shall stamp and sign all plans, drawings, and calculations for the major piping and plumbing systems, subject to CBO design review and approval, and submit a signed statement to the CBO when the proposed piping and plumbing systems have been designed, fabricated, and installed in accordance with all of the applicable laws, ordinances, regulations and industry standards (**2013**~~2007~~ CBC, Appendix Chapter 1, § **107.3.4**~~106.3.4~~, Design Professional in Responsible Charge), which may include, but are not limited to:

- American National Standards Institute (ANSI) B31.1 (Power Piping Code);
- ANSI B31.2 (Fuel Gas Piping Code);
- ANSI B31.3 (Chemical Plant and Petroleum Refinery Piping Code);
- ANSI B31.8 (Gas Transmission and Distribution Piping Code);
- Title 24, California Code of Regulations, Part 5 (California Plumbing Code);
- Title 24, California Code of Regulations, Part 6 (California Energy Code, for building energy conservation systems and temperature control and ventilation systems);
- Title 24, California Code of Regulations, Part 2 (California Building Code); and
- ~~San Diego County codes; and~~
- City of Carlsbad **Municipal Ordinance, Title 18, Building Codes and Standards** ~~regulations and ordinances~~.

The CBO may deputize inspectors to carry out the functions of the code enforcement agency (**2013**~~2007~~ CBC, Appendix Chapter 1, §103.3, Deputies).

Verification: At least 30 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of any increment of major piping or plumbing construction listed in **Facility Design Table 2**, Condition of Certification **GEN-2,** above, the project owner shall submit to the CBO for design review and approval the final plans, specifications, and calculations, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with applicable LORS, and shall send the CPM a copy of the transmittal letter in the next monthly compliance report.

The project owner shall transmit to the CPM, in the monthly compliance report following completion of any inspection, a copy of the transmittal letter conveying the CBO's inspection approvals.

MECH-2 For all pressure vessels installed in the plant, the project owner shall submit to the CBO and California Occupational Safety and Health Administration (Cal-OSHA), prior to operation, the code certification papers and other documents required by applicable LORS. Upon completion of the installation of any pressure vessel, the project owner shall request the appropriate CBO and/or Cal-OSHA inspection of that installation (**2013**~~2007~~ CBC, Appendix Chapter 1, §**110**~~109.5~~, Inspections ~~Requests~~).

The project owner shall:

1. Ensure that all boilers and fired and unfired pressure vessels are designed, fabricated, and installed in accordance with the appropriate section of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, or other applicable code. Vendor certification, with identification of applicable code, shall be submitted for prefabricated vessels and tanks; and

2. Have the responsible design engineer submit a statement to the CBO that the proposed final design plans, specifications, and calculations conform to all of the requirements set forth in the appropriate ASME Boiler and Pressure Vessel Code or other applicable codes.

Verification: At least 30 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of on-site fabrication or installation of any pressure vessel, the project owner shall submit to the CBO for design review and approval, the above-listed documents, including a copy of the signed and stamped engineer's certification, with a copy of the transmittal letter to the CPM.

The project owner shall transmit to the CPM, in the monthly compliance report following completion of any inspection, a copy of the transmittal letter conveying the CBO's and/or Cal/OSHA inspection approvals.

MECH-3 The project owner shall submit to the CBO for design review and approval the design plans, specifications, calculations, and quality control procedures for any heating, ventilating, air conditioning (HVAC), or refrigeration system. Packaged HVAC systems, where used, shall be identified with the appropriate manufacturer's data sheets.

The project owner shall design and install all HVAC and refrigeration systems within buildings and related structures in accordance with the CBC and other applicable codes. Upon completion of any increment of construction, the project owner shall request the CBO's inspection and approval of that construction. The final plans, specifications and calculations shall include approved criteria, assumptions, and methods used to develop the design. In addition, the responsible mechanical engineer shall sign and stamp all plans, drawings and calculations and submit a signed statement to the CBO that the proposed final design plans, specifications and calculations conform with the applicable LORS (**2013**~~2007~~ CBC, Appendix Chapter 1, § **110.3.7**~~109.3.7~~,

Energy Efficiency Inspections; § **107.3.4**~~106.3.4~~, Design Professionals in Responsible Charge).

Verification: At least 30 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of construction of any HVAC or refrigeration system, the project owner shall submit to the CBO the required HVAC and refrigeration calculations, plans, and specifications, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with the CBC and other applicable codes, with a copy of the transmittal letter to the CPM.

ELEC-1 Prior to the start of any increment of electrical construction for all electrical equipment and systems **120**~~480~~ Volts or higher (see a representative list, below), with the exception of underground duct work and any physical layout drawings and drawings not related to code compliance and life safety, the project owner shall submit, for CBO design review and approval, the proposed final design, specifications, and calculations (**2013**~~2007~~ CBC, Appendix Chapter 1, § **107**~~106.1~~, Submittal Documents). Upon approval, the above listed plans, together with design changes and design change notices, shall remain on the site or at another accessible location for the operating life of the project. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS (**2013**~~2007~~ CBC, Appendix Chapter 1, § **105**~~109.6~~, **Permits;** ~~Approval Required;~~ § **110**~~109.5~~, Inspection**s** ~~Requests~~). All transmission facilities (lines, switchyards, switching stations, and substations) are handled in conditions of certification in the **Transmission System Engineering** section of this document.

A. Final plant design plans shall include:

1. one-line diagrams for the 13.8 kV, 4.16 kV and **120/**480 V systems; and

2. system grounding drawings.

B. Final plant calculations must establish:

1. short-circuit ratings of plant equipment;

2. ampacity of feeder cables;

3. voltage drop in feeder cables;

4. system grounding requirements;

5. coordination study calculations for fuses, circuit breakers and protective relay settings for the 13.8 kV, 4.16 kV and **120/**480 V systems; **and**

~~6. system grounding requirements; and~~

6~~7~~. lighting energy calculations.

C. The following activities shall be reported to the CPM in the monthly compliance report:

1. Receipt or delay of major electrical equipment;

2. Testing or energization of major electrical equipment; and

3. A signed statement by the registered electrical engineer certifying that the proposed final design plans and specifications conform to requirements set forth in the Energy Commission decision.

Verification: At least 30 days (or within a project owner- and CBO-approved alternative time frame) prior to the start of each increment of electrical construction, the project owner shall submit to the CBO for design review and approval the above-listed documents. The project owner shall include in this submittal a copy of the signed and stamped statement from the responsible electrical engineer attesting compliance with the applicable LORS, and shall send the CPM a copy of the transmittal letter in the next monthly compliance report.

GEOLOGY & PALEONTOLOGY

The conditions of certification below include the approved conditions of certification from the licensed CECP and any modifications, additions or deletions required for the amended CECP. If compliance work has begun and no changes are required for the amended project, then the project owner need not duplicate those previous compliance activities. The compliance work already performed has been duly noted.

Staff has proposed modifications to the **Geology & Paleontology** Conditions of Certification for the originally-licensed CECP, as shown below. (**Note:** Deleted text is in ~~strikethrough~~, new text is **bold and underlined**).

General Conditions of Certification with respect to engineering geology are proposed under Conditions of Certification **GEN-1, GEN-5**, and **CIVIL-1** in the **Facility Design** section and in **GEO-1** of this section. Proposed paleontological Conditions of Certification follow in **PAL-1** through **PAL-8**. It is staff's opinion that the likelihood of encountering paleontologic resources could be high in areas where native Pleistocene or Eocene age deposits occur in excavations. Staff would consider reducing monitoring intensity, at the recommendation of the project PRS, following examination of sufficient, representative excavations that fully describe site stratigraphy.

GEO-1 **A Soils Engineering Report as required by Section 1803 of the California Building Code (CBC 2013), or its successor in effect at the time construction of the project were to commence, shall specifically include laboratory test data, associated geotechnical engineering analyses, and a thorough discussion of seismicity; liquefaction; dynamic compaction; compressible soils; corrosive soils; and tsunami. In accordance with CBC 2013, the report should also include recommendations for ground improvement and/or foundation systems necessary to mitigate these potential geologic hazards, if present.**

Verification: **The project owner shall include in the application for a grading permit a copy of the Soils Engineering Report which addresses the potential for strong seismic shaking; liquefaction; dynamic compaction; settlement due to compressible soils; corrosive soils, and tsunami, and a summary of how the results of the analyses were incorporated into the project foundation and grading plan design for review and comment by the delegate chief building official (CBO). A copy of the Soils Engineering Report, application for grading permit and any comments by the CBO are to be provided to the CPM at least 30 days prior to grading.**

PAL-1 The project owner shall provide the **compliance project manager**~~Compliance Project Manager~~ (CPM) with the resume and qualifications of its **paleontological resource specialist**~~Paleontological Resource Specialist~~ (PRS) for review and approval. If the approved PRS is replaced prior to completion of project mitigation and submittal of the **paleontological resources report (PRR),** ~~Paleontological Resources Report,~~ the project owner shall obtain CPM approval of the replacement PRS.

~~The project owner shall keep resumes on file for qualified Paleontological Resource Monitors (PRMs). If a PRM is replaced, the resume of the replacement PRM shall also be provided to the CPM.~~

The PRS resume shall include the names and phone numbers of references. The resume shall also demonstrate to the satisfaction of the CPM the appropriate education and experience to accomplish the required paleontological resource tasks.

As determined by the CPM, the PRS shall meet the minimum qualifications for a **qualified professional paleontologist** ~~vertebrate paleontologist~~ as **defined** ~~described~~ in the **Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources by the** Society of Vertebrate Paleontology (SVP **2010).**~~guidelines of 1995.~~ The experience of the PRS shall include the following:

1. Institutional affiliations, appropriate credentials, and college degree;

2. Ability to recognize and collect fossils in the field;

3. Local geological and biostratigraphic expertise;

4. Proficiency in identifying vertebrate and invertebrate fossils; and

5. At least three years of paleontological resource mitigation and field experience in California and at least one year of experience leading paleontological resource mitigation and field activities.

The project owner shall ensure that the PRS obtains qualified paleontological resource monitors **(PRMs)** to monitor as he or she deems necessary on the project.

~~Paleontologic Resource Monitors~~**PRMs** shall have the equivalent **or combination** of the following qualifications **approved by the CPM**:

- BS or BA degree in geology or paleontology, and one year of experience monitoring in California; or
- AS or AA in geology, paleontology, or biology, and four years' experience monitoring in California; or
- Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in California.

The project owner shall keep resumes on file for qualified paleontological resources monitors (PRMs). If a PRM is replaced, the resume of the replacement PRM shall also be provided to the CPM for review and approval.

Verification:

1. At least 60 days prior to the start of ground disturbance, the project owner shall submit a resume and statement of availability of its designated PRS for on-site work **to the CPM for approval.**

2. At least 20 days prior to ground disturbance, the PRS or project owner shall provide a letter with resumes naming anticipated **PRMs** ~~monitors~~ for the project**. The letter shall state**~~, stating~~ that the identified **PRMs** ~~monitors~~ meet the minimum qualifications for paleontological resource monitoring **as** required by **this** ~~the~~ condition **of certification.** If additional **PRMs** ~~monitors~~ are obtained during the project, the PRS shall provide additional letters and resumes to the CPM. The letter shall be provided to the CPM **for approval** no later than one week prior to the monitor's beginning on-site duties.

3. Prior to **any change** ~~the termination or release~~ of **the** ~~a~~ PRS, the project owner shall submit the resume of the proposed new PRS to the CPM for review and approval.

PAL-2 The project owner shall provide to the PRS and the CPM, for approval, maps and drawings showing the footprint of the power plant, construction lay down areas, and all related facilities. Maps shall identify all areas of the project where ground disturbance is anticipated. If the PRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the PRS and CPM. The site grading plan and **the** plan and profile drawings for the utility lines would be acceptable for this purpose. The plan drawings should show the location, depth, and extent of all ground disturbances and be at a scale between 1 inch = 40 feet and 1 inch = 100 feet ~~range.~~ If the footprint of the project or its linear facilities change, the project owner shall provide maps and drawings reflecting those changes to the PRS and CPM.

If construction of the project proceeds in phases, maps and drawings may be submitted prior to the start of each phase. A letter identifying the proposed schedule of each project phase shall be provided to the PRS and CPM. Before work commences on affected phases, the project owner shall notify the PRS and CPM of any construction phase scheduling changes.

At a minimum, the project owner shall ensure that the PRS or PRM consults weekly with the project superintendent or construction field manager to confirm area(s) to be worked the following week ~~and~~ until ground disturbance is completed.

Verification:

1. At least 30 days prior to the start of ground disturbance, the project owner shall provide the maps and drawings to the PRS and CPM.

2. ~~(2)~~ If there are changes to the footprint of the project, revised maps and drawings shall be provided to the PRS and CPM at least 15 days prior to the start of ground disturbance.

3. ~~(3)~~ If there are changes to the scheduling of the construction phases, the project owner shall submit a letter to the CPM within five days of identifying the changes.

PAL-3 The project owner shall ensure that the PRS prepares **a Paleontological Resources Monitoring** and **Mitigation Plan (PRMMP) and** ~~the project owner~~ submits **the PRMMP** to the CPM for review and approval~~, a paleontological resources monitoring and mitigation plan (PRMMP) to identify general and specific measures to minimize potential impacts to significant paleontological resources.~~ Approval of the PRMMP by the CPM shall occur prior to any ground disturbance. The PRMMP shall function as the formal guide for monitoring, collecting, and sampling activities, and may be modified with CPM approval. **The PRMMP** ~~This document~~ shall be used as the basis of discussion when on-site decisions or changes are proposed. Copies of the PRMMP shall **include all updates and** reside with the PRS, each ~~monitor~~**PRM**, the project owner's on-site manager, and the CPM.

The PRMMP shall be developed in accordance with the guidelines of the Society of Vertebrate Paleontology (SVP **2010**~~, 1995~~) and shall include, but not be limited, to the following:

1. Assurance that the performance and sequence of project-related tasks, such as any literature searches, pre-construction surveys, worker environmental training, fieldwork, flagging or staking, construction monitoring, mapping and data recovery, fossil preparation and collection, identification and inventory, preparation of final reports, and transmittal of materials for curation will be performed according to PRMMP procedures;

2. Identification of the person(s) expected to assist with each of the tasks identified within the PRMMP and **these conditions** ~~the Conditions~~ of **certification** ~~Certification~~;

3. A thorough discussion of the anticipated geologic units expected to be encountered, the location and depth of the units relative to the project when known, and the known sensitivity of those units based on the occurrence of fossils either in that unit or in correlative units;

4. An explanation of why **sampling is needed, a description of the sampling methodology,** ~~how,~~ and how much sampling is expected to take place ~~and~~ in **which geologic** ~~what~~ units. Include descriptions of different sampling procedures that shall be used for fine-grained and coarse-grained units;

5. A discussion of the locations where the monitoring of project construction activities is deemed necessary, and a proposed plan for monitoring and sampling **at these locations**;

6. A discussion of procedures to be followed**: (a)**in the event of a significant fossil discovery, **(b) stopping** ~~halting~~ construction, **(c)** resuming construction, and **(d)** how notifications will be performed;

7. A discussion of equipment and supplies necessary for collection of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits;

8. Procedures for inventory, preparation, and delivery for curation into a retrievable storage collection in a public repository or museum, which meet the Society of Vertebrate Paleontology's standards and requirements for the curation of paleontological resources;

9. Identification of the institution that has agreed to receive data and fossil materials collected, requirements or specifications for materials delivered for curation, and how they will be met, and the name and phone number of the contact person at the institution; and

10. A copy of the paleontological **resource conditions** ~~Conditions~~ of **certification** ~~Certification~~.

Verification: At least 30 days prior to ground disturbance, the project owner shall provide a copy of the PRMMP to the CPM. **Approval of the PRMMP by the CPM shall occur prior to any ground disturbance.** The PRMMP shall include an affidavit of authorship by the PRS, and acceptance of the PRMMP by the project owner evidenced by a signature.

PAL-4 Prior to ground disturbance the project owner and the PRS shall prepare a CPM-approved Worker Environmental Awareness Program (WEAP).

~~**PAL-4** Prior to ground disturbance and for the duration of construction activities involving ground disturbance, the project owner and the PRS shall prepare and conduct weekly CPM-approved training for the following workers: project managers, construction supervisors, foremen and general workers involved with or who operate ground-disturbing equipment or tools. Workers shall not excavate in sensitive units prior to receiving CPM-approved worker training. Worker training shall consist of an initial in-person PRS training during the project kick-off, for those mentioned above. Following initial training, a CPM-approved video or in-person training may be used for new employees. The training program may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or other areas of interest or concern. No ground disturbance shall occur prior to CPM approval of the Worker Environmental Awareness Program (WEAP), unless specifically approved by the CPM.~~

The WEAP shall address the possibility of encountering paleontological resources in the field, the sensitivity and importance of these resources, and legal obligations to preserve and protect those resources. **The purpose of the WEAP is to train project workers to recognize paleontologic resources and identify procedures they should follow to ensure there are no impacts to sensitive paleontologic resources. The WEAP shall include:**

~~The training shall include:~~

1. A discussion of applicable laws and penalties under the law;

2. Good quality photographs or physical examples of vertebrate fossils for project sites containing units of high paleontologic sensitivity;

3. Information that the PRS or PRM has the authority to **stop** ~~halt~~ or redirect construction in the event of a discovery or unanticipated impact to a paleontological resource;

4. Instruction that employees are to **stop** ~~halt~~ or redirect work in the vicinity of a find and to contact their supervisor and the PRS or PRM;

5. An informational brochure that identifies reporting procedures in the event of a discovery;

6. A WEAP certification of completion form signed by each worker indicating that he/she has received the training; and

7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

8. **The Project Owner shall also submit the training script and, if the project owner is planning to use a multimedia presentation for training, a copy of the training presentation with the set of reporting procedures for workers to follow that will be used to present the WEAP and qualify workers to conduct ground disturbing activities that could impact paleontologic resources.**

Verification:

1. At least 30 days prior to ground disturbance, the project owner shall submit **to the CPM for review and comment the draft** ~~the proposed~~ WEAP, including the brochure **and sticker. The submittal shall also include a draft training script and, if the project owner is planning to use a multimedia presentation for training, a copy of the training presentation** with the set of reporting procedures for workers to follow.

2. At least **15** ~~30~~ days prior to ground disturbance, the project owner shall submit ~~the script and final video~~ to the CPM for approval ~~if~~ the **final WEAP and** ~~project owner is planning to use a video for interim~~ training **script.**

PAL-5 **No worker shall excavate or perform any ground disturbance activity prior to receiving CPM-approved WEAP training,** ~~(3) If the~~ **prepared in accordance with the requirements of PAL-4 unless specifically approved by** ~~owner requests an alternate paleontological trainer,~~ the **CPM.**

Prior to site mobilization or ~~resume and~~ **any ground disturbance** ~~qualifications of~~ the **following workers** ~~trainer~~ shall be **WEAP trained by** ~~submitted to~~ the **PRS in-person: project managers, construction supervisors, foremen,** ~~CPM for review~~ and **all general workers involved with or who operate ground-disturbing equipment or tools. Following this initial training,** ~~approval prior to installation~~ **the WEAP certification** of **completion form shall be used** ~~an alternate trainer. Alternate trainers shall not conduct training prior~~ to **document who has received the required training.** ~~CPM authorization.~~**Workers subsequently receiving training may be trained using the materials and procedures required in PAL-4.**

Verification:

~~(4)~~ In the **Monthly Compliance Report** ~~monthly compliance report~~ (MCR), the project owner shall provide copies of the WEAP certification of the completion forms with the names of those trained and the trainer or type of training (in-person **and/**or video) offered that month. **An example of a suitable WEAP certification of completion form is provided below.** The MCR shall also include a running total of all persons who have completed the training to date.

PAL-6~~5~~ The project owner shall ensure that the PRS and PRM(s) monitor**,** consistent with the PRMMP**,** all construction-related grading, excavation, trenching, and augering in areas where potential fossil-bearing materials have been identified, both at the site and along any constructed linear facilities associated with the project. In the event that the PRS determines full-time monitoring is not necessary in locations that were identified as potentially fossil-bearing in the PRMMP, the project owner shall notify and seek the concurrence of the CPM.

The project owner shall ensure that the PRS and PRM(s) have the authority to **stop** ~~halt~~ or redirect construction if paleontological resources are encountered. The project owner shall ensure that there is no interference with monitoring activities unless directed by the PRS. Monitoring activities shall be conducted as follows:

1. Any change of monitoring from the accepted schedule in the PRMMP shall be proposed in a letter or email from the PRS and the project owner to the CPM **for review and approval** prior to the change in monitoring**.** ~~and will be included in the monthly compliance report.~~ The letter or email shall

include the justification for the change in monitoring and be submitted to the CPM for review and approval.

2. The project owner shall ensure that the PRM(s) keep a daily monitoring log of paleontological resource activities. The PRS may informally discuss paleontological resource monitoring and mitigation activities with the CPM at any time.

3. The project owner shall ensure that the PRS notifies the CPM within 24 hours of the occurrence of any incidents of non-compliance with any paleontological resources **conditions** ~~Conditions~~ of **certification** ~~Certification~~. The PRS shall recommend corrective action to resolve the issues or achieve compliance with the **conditions** ~~Conditions~~ of **certification.** ~~Certification~~.

4. For any significant paleontological resources encountered, either the project owner or the PRS shall notify the CPM within 24 hours, or Monday morning in the case of a weekend event**, when** ~~where~~ construction has been **stopped** ~~halted~~ because of a paleontological find.

The project owner shall ensure that the PRS prepares a summary of monitoring and other paleontological activities **that will be included in each MCR.** ~~placed in the monthly compliance reports.~~ The summary will include the name(s) of PRS or PRM(s) active during the month, general descriptions of training and monitored construction activities, and general locations of excavations, grading, and other activities. A section of the report shall include the geologic units or subunits encountered, descriptions of samplings within each unit, and a list of identified fossils. A final section of the report will address any issues or concerns about the project relating to paleontologic monitoring, including any incidents of non-compliance or any changes to the monitoring plan that have been approved by the CPM. If no monitoring took place during the month, the report shall include an explanation in the summary as to why monitoring was not conducted.

Verification: The project owner shall ensure that the PRS submits the summary of monitoring and paleontological activities in the MCR. When feasible, the CPM shall be notified ten days in advance of any proposed changes in monitoring different from **that** ~~the plan~~ identified in the PRMMP. If there is any unforeseen change in monitoring, the notice shall be given as soon as possible prior to implementation of the change.

~~**PAL-6** The project owner, through the designated PRS, shall ensure that all components of the PRMMP are adequately performed including collection of fossil materials, preparation of fossil materials for analysis, analysis of fossils, identification and inventory of fossils, the preparation of fossils for curation, and the delivery for curation of all significant paleontological resource materials encountered and collected during project construction.~~

Verification: The project owner shall maintain in his/her compliance file copies of signed contracts or agreements with the designated PRS and other qualified research specialists. The project owner shall maintain these files for a period of three years after project completion and approval of the CPM-approved paleontological resource report (see **PAL-7**). The project owner shall be responsible for paying any curation fees charged by the museum for fossils collected and curated as a result of paleontological mitigation. A copy of the letter of transmittal submitting the fossils to the curating institution shall be provided to the CPM.

PAL-7 The project owner shall ensure preparation of a Paleontological Resources Report (PRR) by the designated PRS. The PRR shall be prepared following completion of the ground-disturbing activities. The PRR shall include an analysis of the collected fossil materials and related information, and **shall be submitted** submit it to the CPM for review and approval.

The report shall include, but is not limited to, a description and inventory of recovered fossil materials; a map showing the location of paleontological resources encountered; **the PRS' description** determinations of sensitivity and significance **of those resources**; and a statement by the PRS that project impacts to paleontological resources have been mitigated below the level of significance.**; and indicate if and how fossil material was curated in accordance with PAL-8;**

Verification: Within 90 days after completion of ground-disturbing activities, including landscaping, the project owner shall submit the PRR under confidential cover to the CPM.

PAL-8 The project owner, through the designated PRS, shall ensure that all components of the PRMMP are adequately performed, including collection of fossil material, preparation of fossil material for analysis, analysis of fossils, identification and inventory of fossils, preparation of fossils for curation, and delivery for curation of all significant paleontological resource materials encountered and collected during project construction. The project owner shall pay all curation fees charged by the museum for fossil material collected and curated as a result of paleontological mitigation. The project owner shall also provide the curator with documentation showing the project owner irrevocably and unconditionally donates, gives, and assigns permanent, absolute, and unconditional ownership of the fossil material.

Verification: Within 60 days after the submittal of the PRR, the project owner shall submit documentation to the CPM showing fees have been paid for curation and the owner relinquishes control and ownership of all fossil material.

TRANSMISSION SYSTEM ENGINEERING

TSE-1 The project owner shall furnish to the CPM and to the CBO a schedule of transmission facility design submittals, a Master Drawing List, a Master Specifications List, and a Major Equipment and Structure List. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the project owner shall provide designated packages to the CPM when requested.

Verification: At least 60 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of construction, the project owner shall submit the schedule, a Master Drawing List, and a Master Specifications List to the CBO and to the CPM. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment (see a list of major equipment in Table 1: Major Equipment List below). Additions and deletions shall be made to the table only with CPM and CBO approval. The project owner shall provide schedule updates in the Monthly Compliance Report.

Table 1:
Major Equipment List

Breakers
Step-up Transformer
Switchyard
Busses
Surge Arrestors
Disconnects and Wave-traps
Take off facilities
Electrical Control Building
Switchyard Control Building
Transmission Pole/Tower
Insulators and Conductors
Grounding System

TSE-2 For the power plant switchyard, outlet line and termination, the project owner shall not begin any increment of construction until plans for that increment have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one year after completion of construction. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. The following activities shall be reported in the Monthly Compliance Report:

A. receipt or delay of major electrical equipment;

B. testing or energization of major electrical equipment; and

C. the number of electrical drawings approved, submitted for approval, and still to be submitted.

Verification: At least 30 days (or a lesser number of days mutually agreed to by the project owner and the CBO) prior to the start of each increment of construction, the project owner shall submit to the CBO for review and approval the final design plans, specifications, and calculations for equipment and systems of the power plant switchyard, outlet line and termination, including a copy of the signed and stamped statement from the responsible electrical engineer attesting to compliance with the applicable LORS, and send the CPM a copy of the transmittal letter in the next Monthly Compliance Report.

TSE-3 The project owner shall ensure that the design, construction and operation of the proposed transmission facilities will conform to all applicable LORS, including the requirements listed below. The project owner shall submit the required number of copies of the design drawings and calculations to the CBO as determined by the CBO.

a) The power plant switchyard and outlet line shall meet or exceed the electrical, mechanical, civil and structural requirements of CPUC General Order 95 or National Electric Safety Code (NESC), Title 8 of the California Code and Regulations (Title 8), Articles 35, 36, and 37 of the "High Voltage Electric Safety Orders", California ISO standards, National Electric Code (NEC) and related industry standards.

b) Breakers and busses in the power plant switchyard and other switchyards, where applicable, shall be sized to accommodate full output from the project and to comply with a short-circuit analysis.

c) Outlet line crossings and line parallels with transmission and distribution facilities shall be coordinated with the transmission line owner and comply with the owner's standards.

d) The project conductors shall be sized to accommodate the full output from the project.

e) Termination facilities shall comply with applicable SDG&E interconnection standards.

f) The project owner shall provide the following for all 6 CECP units to the CPM:

i) The Special Protection System (SPS) sequencing and timing if applicable,

ii) The electrical one-line diagrams for the SDG&E Encina 230 kV switchyard with all updates of buses and circuit breakers with associated disconnect switches including their types and/or ampere

ratings and leveled transmission outlets, considering decommissioning and disconnection of all existing Encina generator units

iii) A letter stating that the mitigation measures or projects selected by the transmission owners for each criteria violation are acceptable, if applicable,

iv) The operational study report based on 2017 in-service date or current commercial operation date (COD) system conditions from the California and/or SDG&E.

v) A copy of the executed LGIA signed by the California ISO and the project owner

Verification: At least 60 days prior to the start of construction of transmission facilities (or a lesser number of days mutually agreed to by the project owner and CBO), the project owner shall submit to the CBO for approval:

a) Design drawings, specifications and calculations conforming with CPUC General Order 95 or NESC, Title 8, Articles 35, 36 and 37 of the "High Voltage Electric Safety Orders", NEC, applicable interconnection standards and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems and major switchyard equipment.

b) For each element of the transmission facilities identified above, the submittal package to the CBO shall contain the design criteria, a discussion of the calculation method(s), a sample calculation based on "worst case conditions"[2] and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or NESC, Title 8, California Code of Regulations, Articles 35, 36 and 37 of the, "High Voltage Electric Safety Orders", NEC, applicable interconnection standards, and related industry standards.

c) Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in responsible charge, a route map, and an engineering description of equipment and the configurations covered by requirements **TSE-3** a) through f) above.

d) The electrical one-line diagrams for the SDG&E Encina 230 kV switchyard with all updates of buses and circuit breakers with associated disconnect switches including their types and/or ampere ratings and leveled transmission outlets, considering decommissioning and disconnection of all existing Encina generator units

e) The Special Protection Scheme (SPS) sequencing and timing if applicable shall be provided concurrently to the CPM.

f) A letter stating that the mitigation measures or projects selected by the transmission owners for each criteria violation are acceptable, if applicable.

[2] Worst case conditions for the foundations would include for instance, a dead-end or angle pole.

g) The operational study report for the CECP units based on 2017 in-service date or current COD system conditions from the California ISO and/or SDG&E.

h) A copy of the executed LGIA for the CECP signed by the California ISO and the project owner.

TSE-4 The project owner shall inform the CPM and CBO of any impending changes that may not conform to requirements **TSE-3** a) through f), and have not received CPM and CBO approval, and request approval to implement such changes. A detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change shall accompany the request. Construction involving changed equipment or substation configurations shall not begin without prior written approval of the changes by the CBO and the CPM.

Verification: At least 60 days prior to the construction of transmission facilities, the project owner shall inform the CBO and the CPM of any impending changes that may not conform to requirements of **TSE-3** and request approval to implement such changes.

TSE-5 The project owner shall provide the following notice to the California ISO prior to synchronizing the facility with the California Transmission system:

a) At least one week prior to synchronizing the facility with the grid for testing, provide the California ISO a letter stating the proposed date of synchronization; and

b) At least one business day prior to synchronizing the facility with the grid for testing, provide telephone notification to the California ISO Outage Coordination Department.

Verification: The project owner shall provide copies of the California ISO letter to the CPM when it is sent to the California ISO one week prior to initial synchronization with the grid. The project owner shall contact the California ISO Outage Coordination Department, Monday through Friday, between the hours of 0700 and 1530 at (916) 351-2300 at least one business day prior to synchronizing the facility with the grid for testing. A report of conversation with the California ISO shall be provided electronically to the CPM one day before synchronizing the facility with the California transmission system for the first time.

TSE-6 The project owner shall be responsible for the inspection of the transmission facilities during and after project construction, and any subsequent CPM and CBO approved changes thereto, to ensure conformance with CPUC GO-95 or NESC, Title 8, CCR, Articles 35, 36 and 37 of the, “High Voltage Electric Safety Orders”, applicable interconnection standards, NEC and related industry standards. In case of non-conformance, the project owner shall inform the CPM and CBO in writing, within ten days of discovering such non-conformance and describe the corrective actions to be taken.

Verification: Within 120 days after first synchronization of the project, the project owner shall transmit to the CPM and CBO:

a) "As built" engineering description(s) and one-line drawings of the electrical portion of the facilities signed and sealed by the registered electrical engineer in responsible charge. A statement attesting to conformance with CPUC GO-95 or NESC, Title 8, California Code of Regulations, Articles 35, 36, and 37 of the "High Voltage Electric Safety Orders" and applicable interconnection standards, NEC, related industry standards, and these conditions shall be provided concurrently.

b) An "as built" engineering description of the mechanical, structural, and civil portion of the transmission facilities signed and sealed by the registered engineer in responsible charge or acceptable alternative verification. "As built" drawings of the electrical, mechanical, structural, and civil portion of the transmission facilities shall be maintained at the power plant and made available, if requested, for CPM audit as set forth in the "Compliance Monitoring Plan".

c) A summary of inspections of the completed transmission facilities, and identification of any nonconforming work and corrective actions taken, signed and sealed by the registered engineer in charge.

WASTE MANAGEMENT

Staff has proposed modifications to the **Waste Management** conditions of certification in the licensed CECP Decision as shown below. Included is a new staff proposed **WASTE-12**, which incorporates comments received on the PSA version. (**Note:** Deleted text is in ~~strikethrough~~, new text is **bold and underlined**)

WASTE-1 The project owner shall ensure that the project site is properly characterized and remediated as necessary pursuant to the Corrective Action Plan reviewed and approved by the San Diego County Department of Environmental Health (SDCDEH). In no event shall project construction commence in areas requiring characterization and remediation until SDCDEH and the CPM have determined that all necessary remediation has been accomplished.

Verification: At least 30 days prior to remediation, the project owner shall submit to the CPM for review and approval copies of all pertinent correspondence, work plans, agreements, and authorizations between **the project owner** and SDCDEH regarding the Corrective Action Plan requirements and activities at the **project** site. At least 60 days prior to the start of site mobilization, the project owner shall provide to the CPM for review and approval written notice from SDCDEH that the site has been investigated and remediated as necessary in accordance with the Correction Action Plan.

WASTE-2 Prior to removal of the aboveground storage tanks (ASTs), the project owner shall complete a SDCDEH Hazardous Waste Tank Certification form and obtain a permit from the city of Carlsbad Fire Department. Prior to demolition of the ASTs, SDCDEH and the Fire Department must acknowledge the form is complete, and provide written concurrence that the information presented is adequate to comply with permitting requirements for removal. This information and written concurrence must be submitted to the CPM for review and approval.

Verification: At least 60 days prior to commencement of site mobilization, the project owner shall provide the form and permits to remove the ASTs to the CPM for review and approval. The project owner shall inform the CPM via the monthly compliance report, of the date when all ASTs were removed from the site.

WASTE-3 The project owner shall provide the résumé of an experienced and qualified professional engineer or professional geologist who shall be available for consultation during site characterization (if needed), demolition, excavation, and grading activities, to the CPM for review and approval. The résumé shall show experience in remedial investigation and feasibility studies.

The professional engineer or professional geologist shall be given full authority by the project owner to oversee any earth moving activities that have the potential to disturb contaminated soil.

Verification: At least 30 days prior to the start of site mobilization, the project owner shall submit the résumé to the CPM for review and approval.

WASTE-4 If potentially contaminated soil is identified during site characterization, demolition, excavation, or grading at either the proposed site or linear facilities, as evidenced by discoloration, odor, detection by handheld instruments, or other signs, the professional engineer or professional geologist shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and provide a written report to the project owner, authorized representatives of ~~Department of Toxic Substances Control (DTSC),~~ the SDCDEH, and the CPM stating the recommended course of action.

Depending on the nature and extent of contamination, the professional engineer or professional geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If, in the opinion of the professional engineer or professional geologist, significant remediation may be required, the project owner shall contact the authorized representatives of ~~DTSC,~~ the SDCDEH, and the CPM for guidance and possible oversight.

Verification: The project owner shall submit any final reports filed by the professional engineer or professional geologist to the authorized representatives of ~~DTSC,~~ the SDCDEH, and the CPM for approval within five days of their receipt. The project owner shall notify the CPM within 24 hours of any orders issued to halt construction.

WASTE-5 The project owner shall prepare a Demolition and Construction Waste Management Plan for all wastes generated during demolition and construction of the facility and shall submit the plan to the CPM for review and approval. The plan may be submitted in two sections: Demolition activities and Construction activities. Both sections of the plan shall contain, at a minimum, the following:

- a description of all demolition and construction waste streams, including projections of frequency, amounts generated, and hazard classifications;
- management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best management practices to be employed, treatment methods and companies providing treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/source reduction plans.
- A reuse/recycling Debris Management Plan for demolition and construction materials that meets or exceeds the waste diversion goals established by the Integrated Waste Management Compliance Act (Pub. Resources Code, § 41780 et seq.) and CALGreen Title 24, California Code of Regulations, Part 11sections 4.408, 5.408, 301.1.1 and 301.3.

Verification: The project owner shall submit the demolition section of the Demolition and Construction Waste Management Plan to the CPM for approval at least 30 days prior to the initiation of demolition activities at the site. The project owner shall submit to the ~~Construction section of the Demolition and Construction Waste Management Plan to the CPM for approval at least 30 days prior to the initiation of construction activities at the site.~~ CPM **copies of the documentation required by CALGreen Title 24, California Code of Regulations, Part 11 section 5.408.1.4.** ~~**copies of receipts from a construction and demolition recycling facility certified by the city of San Diego.**~~

WASTE-6 Prior to demolition of existing structures, the project owner shall complete and submit a copy of a **San Diego County Air Pollution Control District (District)** ~~SDCDEH~~ Asbestos **Renovation and** Demolition Notification Form to the CPM and the **District** for **review**. ~~**After receiving approval, the**~~**The** project owner shall remove all **asbestos-containing material** (ACM) from the site prior to demolition.

Verification: At least ~~**60**~~ **ten** days prior to commencement of structure demolition, the project owner shall provide the Asbestos **Renovation and** Demolition Notification Form to the CPM and to the ~~SDCDEH~~ **District** for **review**. The project owner shall inform the CPM via the monthly compliance report, of the date asbestos is removed.

WASTE-7 The project owner shall obtain a hazardous waste generator identification number from the United States Environmental Protection Agency prior to generating any hazardous waste during construction and operations.

Verification: The project owner shall keep a copy of the identification number on file at the project site and provide the number to the CPM in the next Monthly Compliance Report.

WASTE-8 Upon becoming aware of any impending waste management-related enforcement action by any local, state, or federal authority, the project owner shall notify the CPM of any such action taken or proposed to be taken against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts.

Verification: The project owner shall notify the CPM in writing within ten days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the way project-related wastes are managed.

WASTE-9 The project owner shall prepare an Operation Waste Management Plan for all wastes generated during operation of the facility and shall submit the plan to the CPM for review and approval. The plan shall contain, at a minimum, the following:

a detailed description of all operation and maintenance waste streams, including projections of amounts to be generated, frequency of generation, and waste hazard classifications;

management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best management practices to be employed, treatment methods and companies providing treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/source reduction plans;

all information and reports of conversations with the local Certified Unified Program Agency and the Department of Toxic Substances Control regarding any waste management requirements necessary for project activities. Copies of all required waste management permits, notices, and/or authorizations shall be included in the plan and updated as necessary;

a detailed description of how facility wastes will be managed and any contingency plans to be employed in the event of an unplanned closure or planned temporary facility closure; and

a detailed description of how facility wastes will be managed and disposed upon closure of the facility.

Verification: The project owner shall submit the Operation Waste Management Plan to the CPM for approval at least 30 days prior to the start of project operation. The project owner shall submit any required revisions to the CPM within 20 days of notification from the CPM that revisions are necessary.

The project owner shall also document in each Annual Compliance Report the actual volume of wastes generated and the waste management methods used during the year; provide a comparison of the actual waste generation and management methods used to those proposed in the original Operation Waste Management Plan; and update the Operation Waste Management Plan as necessary to address current waste generation and management practices.

WASTE-10 Deleted, ~~The project owner shall ensure that the Ocean-Water Purification System's filter cake is tested pursuant to the requirements of California Code of Regulations, Title 22, Section 66262.10, report the findings to the CPM, and ensure that the filter cake is properly transported and deposited at an appropriate disposal facility.~~

~~**Verification:** The project owner shall report the results of filter cake testing to the CPM. If two consecutive tests show that the sludge is non-hazardous, the project owner may apply to the CPM to discontinue testing.~~

WASTE-11 The project owner shall ensure that all spills or releases of hazardous substances, materials, or waste are reported, cleaned up, and remediated as

necessary, in accordance with all applicable federal, state, and local requirements

Verification: The project owner shall document all unauthorized releases and spills of hazardous substances, materials, or wastes that occur on the project property or related pipeline and transmission corridors. The documentation shall include, at a minimum, the following information: location of release; date and time of release; reason for release; volume released; amount of contaminated soil/material generated; how release was managed and material cleaned up; if the release was reported; to whom the release was reported; release corrective action and cleanup requirements placed by regulating agencies; level of cleanup achieved and actions taken to prevent a similar release or spill; and disposition of any hazardous wastes and/or contaminated soils and materials that may have been generated by the release. Copies of the unauthorized spill documentation shall be provided to the CPM within 30 days of the date the release was discovered.

WASTE-12 The project owner shall prepare and submit to the CPM and SDCDEH, a Soils Management Plan (SMP) prior to demolition of Tanks 1, 2, or 4. The SMP must be prepared by a California Professional Geologist, or a California Registered Civil Engineer with sufficient experience in hazardous waste management. The SMP shall be updated as needed to reflect changes in laws, regulations or site conditions. A SMP summary report, which includes all analytical data and other findings, must be submitted once the earthwork has been completed. Topics covered by the SMP shall include, but not be limited to:

- **Land use history, including description and locations of known contamination.**
- **The nature and extent of previous investigations and remediation at the site.**
- **The nature and extent of unremediated areas at the site.**
- **A listing and description of institutional controls, such as the city's excavation ordinance and other local, state, and federal regulations and laws that will apply to the project.**
- **Names and positions of individuals involved with soils management and their specific role.**
- **An earthwork schedule.**
- **A description of protocols for the investigation and evaluation of previously unidentified contamination that may be potentially encountered, including any temporary and permanent controls that may be required to reduce exposure to onsite workers, visitors, and the public.**
- **Hazardous waste determination and disposal procedures for known and previously unidentified contamination.**

- **Requirements for site specific techniques at the site to minimize dust, manage stockpiles, run-on and run-off controls, waste disposal procedures, etc.**
- **Copies of relevant permits or closures from regulatory agencies**

The SMP may cite to Phase I Environmental Site Assessment (ESA) in lieu of the above requirements for the Encina Power Station where such information is contained in the Phase I Investigation.

At least 45 days prior to demolition of Tanks 1, 2 or 4 ~~and at least 45 days prior to EPS demolition,~~ the project owner shall submit the applicable SMP to the CPM for review and approval. All demolition-associated earthworks at the site, approved subsequent to the Final Commission Decision authorizing this condition shall conform to the SMP. A SMP summary shall be submitted to CPM and SDCDEH within 25 days of completion of any demolition-associated earthwork.

WORKER SAFETY & FIRE PROTECTION

WORKER SAFETY-1 The project owner shall submit to the compliance project manager (CPM) a copy of the Project **Demolition and** Construction Safety and Health Program containing the following:

1. a **Demolition and** Construction Personal Protective Equipment Program;
2. a **Demolition and** Construction Exposure Monitoring Program;
3. a **Demolition and** Construction Injury and Illness Prevention Program;
4. a **Demolition and** Construction Emergency Action Plan; and
5. a **Demolition and** Construction Fire Prevention Plan.
6. **an Encina Power Station Demolition Plan.**

The Personal Protective Equipment Program, the Exposure Monitoring Program, and the Injury and Illness Prevention Program shall be submitted to the CPM for review and approval concerning compliance of the program with all applicable safety orders. The **Demolition and** Construction Emergency Action Plan, ~~and~~ **the Demolition and Construction** Fire Prevention Plan**, and an Encina Power Station Demolition Plan** shall be submitted to the Carlsbad Fire Department for review and comment prior to submittal to the CPM for approval.

Verification: At least 30 days prior to the start of tank **demolition** ~~construction~~, the project owner shall submit to the CPM for review and approval a copy of the Project **Demolition and** Construction Safety and Health Program. The project owner shall provide a copy of a letter to the CPM from the Carlsbad Fire Department stating the fire department's comments on the **Demolition and** Construction Fire Prevention Plan and Emergency Action Plan.

At least 30 days prior to the start of the demolition of the Encina Power Station, the project owner shall submit to the CPM for review and approval a copy of the Encina Power Station Demolition Plan. The project owner shall provide to the CPM a copy of a letter from the Carlsbad Fire Department (CDF) stating the fire department's comments on the Encina Power Station Demolition Plan.

WORKER SAFETY-2 The project owner shall submit to the CPM a copy of the Project Operations and Maintenance Safety and Health Program containing the following:

- an Operation Injury and Illness Prevention Plan;
- an Emergency Action Plan;
- Hazardous Materials Management Program;
- Fire Prevention Plan Cal Code Regs., tit. 8, § 3221); and

- Personal Protective Equipment Program (Cal Code Regs., tit. 8, §§ 3401—3411).

The Operation Injury and Illness Prevention Plan, Emergency Action Plan, and Personal Protective Equipment Program shall be submitted to the CPM for review and approval concerning compliance of the programs with all applicable safety orders. The Fire Prevention Plan and the Emergency Action Plan shall also be submitted to the Carlsbad Fire Department for review and comment.

Verification: At least 30 days prior to the start of first-fire or commissioning, the project owner shall submit to the CPM for approval a copy of the Project Operations and Maintenance Safety and Health Program. The project owner shall provide **to the CPM** a copy of a letter ~~to the CPM~~ from the Carlsbad Fire Department stating the fire department's comments on the Operations Fire Prevention Plan and Emergency Action Plan.

WORKER SAFETY-3 The project owner shall provide a site **Demolition Safety Supervisor (DSS) and a** Construction Safety Supervisor (CSS) who, by way of training and/or experience, ~~is~~ **are** knowledgeable of **tank demolition**, power plant construction activities, and relevant laws, ordinances, regulations, and standards; ~~is~~ **are** capable of identifying workplace hazards relating to the **demolition and/or** construction activities; and have authority to take appropriate action to assure compliance and mitigate hazards. The **DSS or** CSS shall:

1. have overall authority for coordination and implementation of all occupational safety and health practices, policies, and programs;

2. assure that the safety program for the project complies with Cal/OSHA and federal regulations related to power plant projects;

3. assure that all **demolition**, construction and commissioning workers and supervisors receive adequate safety training;

4. complete accident and safety-related incident investigations and emergency response reports for injuries and inform the CPM of safety-related incidents; and

5. assure that all the plans identified in Conditions of Certification **Worker Safety-1** and **2** are implemented.

Verification: At least **30** ~~60~~ days prior to the start of **tank demolition** ~~site mobilization~~, the project owner shall submit to the CPM the name and contact information for the **Demolition Safety Supervisor (DSS) and the** Construction Safety Supervisor (CSS). The contact information of any replacement **DSS or** CSS shall be submitted to the CPM within one business day.

The **DSS and** CSS shall submit in the Monthly Compliance Report a monthly safety inspection report to include:

1. record of all employees trained for that month (all records shall be kept on site for the duration of the project);

2. summary report of safety management actions and safety-related incidents that occurred during the month;

3. report of any continuing or unresolved situations and incidents that may pose danger to life or health; and

4. report of accidents and injuries that occurred during the month.

WORKER SAFETY-4 The project owner shall make payments to the Chief Building Official (CBO) for the services of a Safety Monitor based upon a reasonable fee schedule to be negotiated between the project owner and the CBO. Those services shall be in addition to other work performed by the CBO. The Safety Monitor shall be selected by and report directly to the CBO and will be responsible for verifying that the Construction Safety Supervisor, as required in Condition of Certification **WORKER SAFETY-3**, ~~and for~~ implement**s** ~~ing~~ all appropriate Cal/OSHA and Energy Commission safety requirements. The Safety Monitor shall conduct on-site (including linear facilities) safety inspections at intervals necessary to fulfill those responsibilities **and shall do this during the period of tank demolition/removal, construction of the CECP, and demolition/removal of the EPS.**

Verification: At least **30** ~~60~~ days prior to the start of **tank demolition** ~~construction~~, the project owner shall provide proof of its agreement to fund the Safety Monitor services to the CPM for review and approval.

WORKER SAFETY-5 The project owner shall ensure that a portable automatic external defibrillator (AED) is located on site during tank **demolition,** construction and operations, **and demolition/removal of the EPS** and shall implement a program to ensure that workers are properly trained in its use and that the equipment is properly maintained and functioning at all times. During **demolition of the tanks and the EPS**, construction, and commissioning, the following persons shall be trained in its use and shall be on site whenever the workers that they supervise are on site: the **Demolition** or Construction Project Manager or delegate, the **Demolition or** Construction Safety Supervisor or delegate, and all shift foremen. During operations, all power plant employees shall be trained in its use. The training program shall be submitted to the CPM for review and approval.

Verification: At least 30 ~~60~~ days prior to the start of tank **demolition** ~~site mobilization~~, the project owner shall submit to the CPM a letter stating that a portable automatic external defibrillator (AED) exists on site and a copy of the training and maintenance program for review and approval.

WORKER SAFETY -6
The project owner shall ensure that the below-grade site fire lanes, access points, and ramps (with no more than a ten percent grade) are constructed so that at least two access points through the site perimeter and into the below-grade power plant site are available to the CFD and other emergency response providers. The access roads, below-grade perimeter road, and ramps shall be no less than 28 feet wide. The project owner shall guarantee that the two fire access ramps down into the project site, the upper rim-road, and the fire lane around the perimeter of the below-grade site, are free and clear of all vehicles, equipment, or any other object (mobile or stationary) at all times and that the boundaries or curbs of the ramps and lanes are painted red and contain signage to indicate that they are fire roads and lanes on which parking is not allowed. The final blueprints for the site shall be submitted at least 30 days prior to the start of **CECP Construction** ~~site mobilization~~ to the Carlsbad Fire Department for review and comment and to the CPM for review and approval. Any requested changes in the fire lanes, upper rim road, ramps, and access points shall be made in writing to the CPM and the CBO for review and approval after obtaining comments from the CFD.

Verification: At least 30 days prior to the start of **Phase II, CECP Construction** ~~tank demolition site mobilization~~, the project owner shall submit a copy of the final site blueprints to the Carlsbad Fire Department for review and comment and to the CPM for review and approval. The project owner shall also submit to the CPM a copy of the transmittal letter to the CFD.

At least 60 days prior to the start of commissioning or the arrival on-site of any liquid fuel, natural gas, or hazardous material, whichever occurs first, the project owner shall submit to the CBO for information, to the Carlsbad Fire Department for review and comment, and to the CPM for review and approval, a signed declaration along with photographic evidence that the access ramps and fire lanes are guaranteed to always be clear and unobstructed and that signs and red paint have been placed in the appropriate locations.

WORKER SAFETY-7
The project owner shall place a barrier of sufficient strength and height at the eastern fence line of the project at the widened I-5 Right-of-Way so as to prevent a runaway car or semi-trailer truck from piercing the barrier and going over the edge and down into the power plant site. This barrier shall also serve to prevent line-of-sight viewing of the power plant site from the shoulder of I-5. In designing this barrier, the project owner shall consult with Caltrans and then submit a final plan to the CPM for review and approval. The project owner may also negotiate cost sharing of this barrier with Caltrans and, if the project owner chooses to do so, the cost-sharing contract with Caltrans shall be submitted to the CPM for review and approval.

Verification: At least 60 days prior to the start of **I-5 widening activities that encroach onto the project site** ~~tank demolition site mobilization~~, the project owner shall submit a copy of the final plans for the barrier and any cost-sharing contract to the CPM for review and approval.

~~**WORKER SAFETY-8** The project owner shall ensure that not less than two workers - two technical workers or one technical and one security staff - will be present on the site (the "bowl") at all times whenever the CECP is operating. When the units are dispatched from a shutdown condition, the project owner shall send the two workers to the site while commencing startup; and those two workers shall proceed directly to the site. The project owner shall prepare a plan describing the work- force that shall be present on the power plant site (the "bowl"), their shifts, their duties, their training, the method(s) of real-time continuous communication with the control room they will have available, their enclosed stations (e.g., portable office building), and facilities for personal hygiene on the site, to the CPM for review and approval.~~

~~**Verification:** At least 60 days prior to the start of commercial operations, the project owner shall submit a copy of the staffing plan to the CPM for review and approval.~~

WORKER SAFETY-9 The project owner shall maintain the current dirt access road located on the western perimeter fence line in a sufficient state so as to serve as an emergency response road. In no event shall the project owner grant or dedicate an easement for the Coastal Rail Trail east of the Rail Corridor on the CECP site.

Verification: At least 30 days prior to the start of **Phase II, CECP Construction**, ~~tank~~

~~demolition site mobilization,~~ the project owner shall submit to the CPM for review and approval a copy of the final plans for maintaining this access road.

WORKER SAFETY-10 The project owner shall prepare a Transformer Fire Protection Plan which shall evaluate any feasible methods that can be used to prevent, contain, and/or control a transformer fire, including the use of new dielectric fluids, pressure sensors with shut-down capability, dissolved gas analyzers, use of compressed-air-foam for fire suppression, on-site storage of suppressants, and sub-surface vaults to contain spilled/leaked dielectric fluids. The project owner shall submit this Plan to the CBO for information, to the Carlsbad Fire Department for review and comment, and to the CPM for review and approval.

Verification: At least 60 days before the arrival of a transformer on site, the project owner shall submit a copy of the Transformer Fire Protection Plan to the CBO for information, to the Carlsbad Fire Department for review and comment, and to the CPM for review and approval.

Not later than 30 days after submitting the Plan for review, the project owner shall submit to the CPM for approval a final plan that incorporates comments and suggestions from the CPM and the CFD.

WORKER SAFETY-11 The project owner shall ensure that the primary source of fire protection water is the city of Carlsbad water system and that the on-site ~~250,000 gallon~~ raw water storage tank is the back-up supply.

Verification: At least 60 days before commencing commissioning, the project owner shall submit to the Carlsbad Fire Department for review and comment, and to the CPM for review and approval engineering drawings showing the source and piping of the primary and back-up fire protection water supplies and a statement that the primary supply is the city of Carlsbad water system.

WORKER SAFETY-12 The owner shall ensure that the compressor building at the modified amended CECP will comply with NFPA requirements for compressor enclosures and that it will also comply with the requirement set forth in 40 CFR Sections 163 through 171 regarding fire and explosion protection systems.

Verification: At least 30 days prior to the start of construction mobilization, the project owner shall submit to the CPM and the CFD for review and for approval by the CPM, documentation of plans for the compressor enclosure at the modified amended CECP demonstrating compliance with the condition described above.

COMPLIANCE CONDITIONS OF CERTIFICATION

For the CECP, staff proposes the Compliance conditions of certification below. These Compliance conditions replace those adopted in the Commission's previous Final Decision for the CECP, TN66185, July 11, 2012.

COM-1: **Unrestricted Access**. The project owner shall take all steps necessary to ensure that the CPM, responsible Energy Commission staff, and delegated agencies or consultants have unrestricted access to the facility site, related facilities, project-related staff, and the records maintained to facilitate audits, surveys, inspections, and general or closure-related site visits. Although the CPM shall normally schedule site visits on dates and times agreeable to the project owner, the CPM reserves the right to make unannounced visits at any time, whether such visits are by the CPM in person or through representatives from Energy Commission staff, delegated agencies, or consultants.

COM-2: **Compliance Record.** The project owner shall maintain electronic copies of all project files and submittals on-site, or at an alternative site approved by the CPM, for the operational life and closure of the project. The files shall also contain at least one hard copy of:

1. the facility's Application(s) for Certification;
2. all amendment petitions and Energy Commission orders;
3. all site-related environmental impact and survey documentation;
4. all appraisals, assessments, and studies for the project;
5. all finalized original and amended structural plans and "as-built" drawings for the entire project;
6. all citations, warnings, violations, or corrective actions applicable to the project; and
7. the most current versions of any plans, manuals and training documentation required by the conditions of certification or applicable LORS.

Energy Commission staff and delegate agencies shall, upon request to the project owner, be given unrestricted access to the files maintained pursuant to this condition.

COM-3: **Compliance Verification Submittals.** Verification lead times associated with the start of construction or closure may require the project owner to file submittals during the AFC process, particularly if construction is planned to commence shortly after certification. The verification procedures, unlike the conditions, may be modified as necessary by the CPM.

A cover letter from the project owner or an authorized agent is required for all compliance submittals and correspondence pertaining to compliance matters. **The cover letter subject line shall identify the project by AFC number, cite the appropriate condition of certification number(s), and give a brief description of the subject of the submittal**. When submitting supplementary or corrected information, the project owner shall reference the date of the previous submittal and the condition(s) of certification applicable.

All reports and plans required by the project's conditions of certification shall be submitted in a searchable electronic format (.pdf, MS Word, or Excel, etc.) and include standard formatting elements such as a table of contents, identifying by title and page number each section, table, graphic, exhibit, or addendum. All report and/or plan graphics and maps shall be adequately scaled and shall include a key with descriptive labels, directional headings, a bar scale, and the most recent revision date.

The project owner is responsible for the content and delivery of all verification submittals to the CPM, whether the actions required by the verification were satisfied by the project owner or an agent of the project owner. All submittals shall be accompanied by an electronic copy on an electronic storage medium, or by e-mail, as agreed upon by the CPM. If hard-copy submittals are required, please address as follows:

Compliance Project Manager
Carlsbad Energy Center Project (07-AFC-6C)
California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814

COM-4: Pre-Construction Matrix and Tasks Prior to Start of Construction. Prior to start of construction, the project owner shall submit to the CPM a compliance matrix including only those conditions that must be fulfilled before the start of construction. The matrix shall be included with the project owner's first compliance submittal or prior to the first pre-construction meeting, whichever comes first, and shall be submitted in a format similar to the description below.

Site mobilization and construction activities shall not start until all of the following occur: the project owner has submitted the pre-construction matrix and all submittals required by compliance verifications pertaining to all pre-construction conditions of certification, and the CPM has issued an authorization-to-construct letter to the project owner. The deadlines for submitting various compliance verifications to the CPM allow sufficient staff time to review and comment on, and if necessary, allow the project owner to revise the submittal in a timely manner. These procedures help ensure that project construction proceeds according to schedule. Failure to submit required compliance documents by

the specified deadlines may result in delayed authorizations to commence various stages of the project.

If the project owner anticipates site mobilization immediately following project certification, it may be necessary for the project owner to file compliance submittals prior to project certification. In these instances, compliance verifications can be submitted in advance of the required deadlines and the anticipated authorizations to start construction. The project owner must understand that submitting compliance verification requirements prior to these authorizations is at the owner's own risk. Any approval by Energy Commission staff prior to project certification is subject to change based upon the Commission Decision, or amendment thereto. Early staff compliance approvals do not imply that the Energy Commission will certify the project for actual construction and operation.

COM-5: Compliance Matrix. The project owner shall submit a compliance matrix to the CPM with each MCR and ACR. The compliance matrix provides the CPM with the status of all conditions of certification in a spreadsheet format. The compliance matrix shall identify:

1. the technical area (e.g., biological resources, facility design, etc.);
2. the condition number;
3. a brief description of the verification action or submittal required by the condition;
4. the date the submittal is required (e.g., sixty (60) days prior to construction, after final inspection, etc.);
5. the expected or actual submittal date;
6. the date a submittal or action was approved by the CBO, CPM, or delegate agency, if applicable;
7. the compliance status of each condition (e.g., "not started," "in progress," or "completed" (include the date); and
8. if the condition was amended, the updated language and the date the amendment was proposed or approved.

The CPM can provide a template for the compliance matrix upon request.

COM-6: Monthly Compliance Reports and Key Events List. The first MCR is due one month following the docketing of the project's Decision unless otherwise agreed to by the CPM. The first MCR shall include the AFC number and an initial list of dates for each of the events identified on the Key Events List. (The Key Events List form is found at the end of this Compliance Plan).

During project pre-construction, construction, or closure, the project owner or authorized agent shall submit an electronic searchable version of the MCR within ten business days after the end of each reporting month, unless otherwise specified by the CPM. MCRs shall be clearly identified for the month being reported. The searchable electronic copy may be filed on an electronic storage medium or by e-mail, subject to CPM approval. The compliance verification submittal condition provides guidance on report production standards, and the MCR shall contain, at a minimum:

1. a summary of the current project construction status, a revised/updated schedule if there are significant delays, and an explanation of any significant changes to the schedule;

2. documents required by specific conditions to be submitted along with the MCR; each of these items shall be identified in the transmittal letter, as well as the conditions they satisfy, and submitted as attachments to the MCR;

3. an initial, and thereafter updated, compliance matrix showing the status of all conditions of certification;

4. a list of conditions that have been satisfied during the reporting period, and a description or reference to the actions that satisfied the condition;

5. a list of any submittal deadlines that were missed, accompanied by an explanation and an estimate of when the information will be provided;

6. a cumulative listing of any approved changes to the conditions of certification;

7. a list of any filings submitted to, and permits issued by, other governmental agencies during the month;

8. a projection of project compliance activities scheduled during the next two months; the project owner shall notify the CPM as soon as any changes are made to the project construction schedule that would affect compliance with conditions of certification;

9. a list of the month's additions to the on-site compliance file; and

10. a listing of complaints, notices of violation, official warnings, and citations received during the month; a description of the actions taken to date to resolve the issues; and the status of any unresolved actions.

COM-7: Annual Compliance Reports. After construction is complete, the project owner must submit searchable electronic ACRs instead of MCRs. ACRs are due for each year of commercial operation and may be required for a specified period after decommissioning to monitor closure compliance, as

specified by the CPM. The searchable electronic copies may be filed on an electronic storage medium or by e-mail, subject to CPM approval. Each ACR must include the AFC number, identify the reporting period, and contain the following:

1. an updated compliance matrix showing the status of all conditions of certification (fully satisfied conditions do not need to be included in the matrix after they have been reported as completed);

2. a summary of the current project operating status and an explanation of any significant changes to facility operations during the year;

3. documents required by specific conditions to be submitted along with the ACR; each of these items shall be identified in the transmittal letter with the condition it satisfies and submitted as an attachment to the ACR;

4. a cumulative list of all post-certification changes approved by the Energy Commission or the CPM;

5. an explanation for any submittal deadlines that were missed, accompanied by an estimate of when the information will be provided;

6. a list of filings submitted to, and permits issued by, other governmental agencies during the year;

7. a projection of project compliance activities scheduled during the next year;

8. a list of the year's additions to the on-site compliance file;

9. an evaluation of the Site Contingency Plan, including amendments and plan updates; and

10. a list of complaints, notices of violation, official warnings, and citations received during the year, a description of how the issues were resolved, and the status of any unresolved matters.

COM-8: **Confidential Information.** Any information that the project owner designates as confidential shall be submitted to the Energy Commission's Executive Director with an application for confidentiality, pursuant to Title 20, California Code of Regulations, section 2505 (a). Any information deemed confidential pursuant to the regulations shall remain undisclosed, as provided in Title 20,

COM-9: **Annual Energy Facility Compliance Fee.** Pursuant to the provisions of section 25806 (b) of the Public Resources Code, the project owner is required to pay an annually adjusted compliance fee. Current compliance fee information is available on the Energy Commission's website at http://www.energy.ca.gov/siting/filing_fees.html. The project owner may also contact the CPM for the current fee information. The initial payment is due on

the date the Energy Commission dockets its final Decision. All subsequent payments are due by July 1 of each year in which the facility retains its certification.

COM-10: Amendments, Staff-Approved Project Modifications, Ownership Changes, and Verification Changes. The project owner shall petition the Energy Commission, pursuant to Title 20, California Code of Regulations, section 1769, to modify the design, operation, or performance requirements of the project or linear facilities, or to transfer ownership or operational control of the facility. The CPM will determine whether staff approval will be sufficient, or whether Commission approval will be necessary. **It is the project owner's responsibility to contact the CPM to determine if a proposed project change triggers the requirements of section 1769.** Section 1769 details the required contents for a Petition to Amend an Energy Commission Decision. The only change that can be requested by means of a letter to the CPM is a request to change the verification method of a condition of certification.

Implementation of a project modification without first securing Energy Commission, or Energy Commission staff, approval may result in an enforcement action, including civil penalties, in accordance with section 25534 of the Public Resources Code. If the Energy Commission's rules regarding amendments are revised, the rules in effect at the time the change is requested shall apply.

COM-11: Reporting of Complaints, Notices, and Citations. Prior to the start of construction or decommissioning, the project owner shall send a letter to property owners within one mile of the project, notifying them of a telephone number to contact project representatives with questions, complaints, or concerns. If the telephone is not staffed 24 hours per day, it shall include automatic answering with a date and time stamp recording.

The project owner shall respond to all complaints within 24 hours or the next business day. The project owner shall post the telephone number at the project site and make it easily visible to passersby during construction, operation, and closure. The project owner shall provide the contact information to the CPM who will post it on the Energy Commission's web page at http://www.energy.ca.gov/sitingcases/carlsbad/

The project owner shall report any disruption to the contact system or telephone number change to the CPM promptly, to allow the CPM to update the Energy Commission's facility webpage accordingly.

In addition to including all complaints, notices, and citations with the MCRs and ACRs, within ten days of receipt, the project owner shall report, and provide copies to the CPM, of all complaints, including noise and lighting complaints, notices of violation, notices of fines, official warnings, and

citations. Complaints shall be logged and numbered. Noise complaints shall be recorded on the form provided in the Noise and Vibration conditions of certification. All other complaints shall be recorded on the complaint form (Attachment A) at the end of this Compliance Plan.

COM-12: Emergency Response Site Contingency Plan. No less than 60 days prior to the start of commercial operation (or other date agreed to by the CPM), the project owner shall submit for CPM review and approval, an Emergency Response Site Contingency Plan (Contingency Plan). The Contingency Plan shall evidence a facility's coordinated emergency response and recovery preparedness for a series of reasonably foreseeable emergency events. The CPM may require the updating of the Contingency Plan over the life of the facility. Contingency Plan elements include, but are not limited to:

1. A site-specific list and direct contact information for persons, agencies, and responders to be notified for an unanticipated event;

2. A detailed and labeled facility map, including all fences and gates, the windsock location (if applicable), the on- and off-site assembly areas, and the main roads and highways near the site;

3. A detailed and labeled map of population centers, sensitive receptors, and the nearest emergency response facilities;

4. A description of the on-site, first response and backup emergency alert and communication systems, site-specific emergency response protocols, and procedures for maintaining the facility's contingency response capabilities, including a detailed map of interior and exterior evacuation routes, and the planned location(s) of all permanent safety equipment;

5. An organizational chart including the name, contact information, and first aid/emergency response certification(s) and renewal date(s) for all personnel regularly on-site;

6. A brief description of reasonably foreseeable, site-specific incidents and accident sequences (on- and off-site), including response procedures and protocols and site security measures to maintain twenty-four-hour site security;

7. Procedures for maintaining contingency response capabilities; and

8. The procedures and implementation sequence for the safe and secure shutdown of all non-critical equipment and removal of hazardous materials and waste (see also specific conditions of certification for the technical areas of **Public Health**, **Waste Management**, **Hazardous Materials Management**, and **Worker Safety**).

COM-13: Incident-Reporting Requirements. Within one hour after it is safe and feasible, the project owner shall notify the CPM or compliance office manager, by telephone and e-mail, of any incident at the power plant or appurtenant facilities that results, or could result, in any of the following:

1. Health and safety impacts on the surrounding population;
2. Property damage off-site;
3. Response by off-site emergency response agencies;
4. Serious on-site injury;
5. Serious environmental damage; or
6. Emergency reporting to any federal, state, or local agency.

The notice shall describe the circumstances, status, and expected duration of the incident. If warranted, as soon as it is safe and feasible, the project owner shall implement the safe shutdown of any non-critical equipment and removal of any hazardous materials and waste that pose a threat to public health and safety and to environmental quality (also, see specific conditions of certification for the technical areas of **HAZARDOUS MATERIALS MANAGEMENT** and **WASTE MANAGEMENT**).

Within one week of the incident, the project owner shall submit to the CPM a detailed incident report, which includes, as appropriate, the following information:

1. A brief description of the incident, including its date, time, and location;
2. A description of the cause of the incident, or likely causes if it is still under investigation;
3. The location of any off-site impacts;
4. Description of any resultant impacts;
5. A description of emergency response actions associated with the incident;
6. Identification of responding agencies;
7. Identification of emergency notifications made to federal, state, and/or local agencies;
8. Identification of any hazardous materials released and an estimate of the quantity released;
9. A description of any injuries, fatalities, or property damage that occurred as a result of the incident;

10. Fines or violations assessed or being processed by other agencies;

11. Name, phone number, and e-mail address of the appropriate facility contact person having knowledge of the event; and

12. Corrective actions to prevent a recurrence of the incident.

The project owner shall maintain all incident report records for the life of the project, including closure. After the submittal of the initial report for any incident, the project owner shall submit to the CPM copies of incident reports within 24 hours of a request.

COM-14: Non-Operation. If the facility ceases operation temporarily, either planned or unplanned, for longer than one week, but less than three months (or other CPM-approved date), the project owner shall notify the CPM (by telephone and e-mail), interested agencies, and nearby property owners. Notice of planned non-operation shall be given at least two weeks prior to the scheduled date. Notice of unplanned non-operation shall be provided no later than one week after non-operation begins.

For any non-operation, a Repair/Restoration Plan for conducting the activities necessary to restore the facility to availability and reliable and/or improved performance shall be submitted to the CPM within one week after notice of non-operation is given. If non-operation is due to an unplanned incident, temporary repairs and/or corrective actions may be undertaken before the Repair/Restoration Plan is submitted. The Repair/Restoration Plan shall include:

1. Identification of operational and non-operational components of the plant;
2. A detailed description of the repair or restoration activities;
3. A proposed schedule for completing the repair or restoration activities;
4. An assessment of whether or not the proposed activities would require changing, adding, and/or deleting any conditions of certification, and/or would cause noncompliance with any applicable LORS; and
5. Planned activities during non-operation, including any measures to ensure continued compliance with all conditions of certification and LORS.

The CPM will determine if CBO oversight or compliance site monitoring is required.

Written updates to the CPM for non-operational periods, until operation resumes, shall include:

1. Progress relative to the schedule;

2. Developments that delayed or advanced progress or that may delay or advance future progress;

3. Any public, agency, or media comments or complaints; and

4. Projected date for the resumption of operation.

During non-operation, all applicable conditions of certification and reporting requirements remain in effect. If, after one year from the date of the project owner's last report of productive Repair/Restoration Plan work, the facility does not resume operation or does not provide a plan to resume operation, the Executive Director may assign suspended status to the facility and recommend commencement of permanent closure activities. Within 90 days of the Executive Director's determination, the project owner shall do one of the following:

1. If the facility has a closure plan, the project owner shall update it and submit it for Energy Commission review and approval.
2. If the facility does not have a closure plan, the project owner shall develop one consistent with the requirements in this Compliance Plan and submit it for Energy Commission review and approval.

COM-15: Facility Closure Planning. To ensure that a facility's eventual permanent closure and long-term maintenance do not pose a threat to public health and safety and/or to environmental quality, the project owner shall coordinate with the Energy Commission to plan and prepare for eventual permanent closure.

A. Provisional Closure Plan and Estimate of Permanent Closure Costs
To assure satisfactory long-term site maintenance and adequate closure for "the whole of a project," the project owner shall submit a Provisional Closure Plan and Cost Estimate for CPM review and approval within 60 days after the start of commercial operation. The Provisional Closure Plan and Cost Estimate shall consider applicable final closure plan requirements, and reflect the use of an independent third party to carry out the permanent closure.

The Provisional Closure Plan and Cost Estimate shall provide for a phased closure process and include but not be limited to:

1. Comprehensive scope of work and itemized budget;

2. Closure plan development costs;

3. Dismantling and demolition;

4. Recycling and site clean-up;

5. Mitigation and monitoring direct, indirect, and cumulative impacts;

6. Site remediation and/or restoration;

7. Interim and long term operation monitoring and maintenance, including long-term equipment replacement costs; and

8. Contingencies.

The project owner shall include an updated Provisional Closure Plan and Cost Estimate in every fifth-year ACR for CPM review and approval. Each updated Provisional Closure Plan and Cost Estimate shall reflect the most current regulatory standards, best management practices, and applicable LORS.

B. Final Closure Plan and Cost Estimate

At least three years prior to initiating a permanent facility closure, the project owner shall submit for Energy Commission review and approval, a Final Closure Plan and Cost Estimate, which includes any long-term, post-closure site maintenance and monitoring. Final Closure Plan and Cost Estimate contents include, but are not limited to:

1. A statement of specific Final Closure Plan objectives;

2. A statement of qualifications and resumes of the technical experts proposed to conduct the closure activities, with detailed descriptions of previous power plant closure experience;

3. Identification of any facility-related installations not part of the Energy Commission certification, designation of who is responsible for these, and an explanation of what will be done with them after closure;

4. A comprehensive scope of work and itemized budget for permanent plant closure and site maintenance activities, with a description and explanation of methods to be used, broken down by phases, including, but not limited to:

a) Dismantling and demolition;

b) Recycling and site clean-up;

c) Impact mitigation and monitoring;

d) Site remediation and/or restoration and;

e) Any contingencies.

5. A revised/updated Final Cost Estimate for all closure activities, by phases, including site monitoring and maintenance costs, and long-term equipment replacement;

6. A schedule projecting all phases of closure activities for the power plant site and all appurtenances constructed as part of the Energy Commission-certified project;

7. An electronic submittal package of all relevant plans, drawings, risk assessments, and maintenance schedules and/or reports, including an above- and below-ground infrastructure inventory map and registered engineer's or delegate CBO's assessment of demolishing the facility; additionally, for any facility that permanently ceased operation prior to submitting a Final Closure Plan and Cost Estimate and for which only minimal or no maintenance has been done since, a comprehensive condition report focused on identifying potential hazards;

8. All information additionally required by the facility's conditions of certification applicable to plant closure;

9. An equipment disposition plan, including:

    a) recycling and disposal methods for equipment and materials; and

    b) identification and justification for any equipment and materials that will remain on-site after closure;

10. A site disposition plan, including but not limited to:

    a) proposed rehabilitation, restoration, and/or remediation procedures, as required by the conditions of certification and applicable LORS; and

    b) site maintenance activities.

11. Identification and assessment of all potential direct, indirect, and cumulative impacts and proposal of mitigation measures to reduce significant adverse impacts to a less-than-significant level; potential impacts to be considered shall include, but not be limited to:

    a) traffic

    b) noise and vibration

    c) soil erosion

    d) air quality degradation

    e) solid waste

    f) hazardous materials

    g) waste water discharges

h) contaminated soil

12. Identification of all current conditions of certification, LORS, federal, state, regional, and local planning efforts applicable to the facility, and proposed strategies for achieving and maintaining compliance during closure;

13. Updated mailing list or listserv of all responsible agencies, potentially interested parties, and property owners within one mile of the facility;

14. Identification of alternatives to plant closure and assessment of the feasibility and environmental impacts of these; and

15. Description of and schedule for security measures and safe shutdown of all non-critical equipment and removal of hazardous materials and waste (see conditions of certification for **Public Health**, **Waste Management**, **Hazardous Materials Management**, and **Worker Safety**).

If implementation of an Energy Commission-approved Final Closure Plan and Cost Estimate is not initiated within one year of its approval date, it shall be updated and re-submitted to the Commission for supplementary review and approval. If a project owner initiates but then suspends closure activities, and the suspension continues for longer than one year, or subsequently abandons the facility, the Final Closure Plan and Cost Estimate shall be resubmitted to the Commission for supplementary review and approval. The project owner remains liable for all costs of contingency planning and closure.

COM-16: Previously Licensed Activities in Progress Prior to Approval of the Amended CECP. Any activity authorized to start prior to the effective date of the Commission Decision approving the Amended CECP license is in compliance with this license if it is conducted under, and in compliance with, the original CECP license.